

John Howard

Military Institutions

O F

V E G E T I U S,

IN FIVE BOOKS,

Translated from the Original

L A T I N.

With a Preface and Notes.

BY LIEUTENANT JOHN CLARKE.

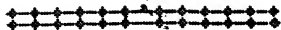


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T O T H E

K I N G.

S I R,

MY Presumption in offering this Work to Your MAJESTY proceeds solely from Devotion and Zeal for Your Service. The established Merit of the Original, the only remaining System of ancient Discipline, and the distinguished Honor it received from the Patronage of a Roman Emperor, seem to render it not wholly unworthy Your MAJESTY's Notice, however it may have suffered in the
Translation.

Translation. And I flatter myself
 Your MAJESTY will be pleased to
 consider this Attempt as the Result
 of a Desire to contribute to the Ad-
 vancement of the military Sciences,
 and to approve myself,

Your MAJESTY's

Most obedient, and

Most devoted,

Subject and Servant,

JOHN CLARK.

P R E F A C E.

SOME Preface seems necessary at the Appearance of an Author who has not the Advantage of being universally known; for such is Vegetius, tho' worthy of a different Fate; to him we are indebted for the only continued and regular System of ancient military Discipline now extant. It is not a little surprising that an Author of such Merit, so highly esteemed by the greatest Men of the Profession among the Moderns, and long since translated into most other European Languages, should be so little known among us. He is the Source whence all the Writers on the military Affairs of the Ancients have drawn their principal Knowledge and Information, tho' all have not owned it with the same Candor; and we may venture to affirm, that the Authors of all the modern Treatises on War are not under less Obligations to him. Under such Circumstances, it seems necessary to give the Sentiments of some great Men in Respect to our Author: I shall therefore insert those of Montecuculli and Folard, Names, I imagine,

of sufficient Authority with a military Reader, to remove all Doubt and Objection. “ Prudence, says the former, forbids us to hazard a Battle, if our Troops are neither disciplined nor inured to War. What Man would be so mad as to attempt it? Not Scipio, Sempronius, nor Vegetius.” Book II, Ch. 2. “ If we read Vegetius with the Attention he deserves, says the Chevalier de Folard, we shall find that his Work is taken entirely from Livy*, reduced to Principle and Method, as far as was consistent with his Plan: a Task of no inconsiderable Labor. He has confined himself within so narrow a Compass in his fourth Book, a Fault we may also complain of in all the others, that he sets aside a Number of Particulars relative to the Attack and Defence of Places, scarcely giving us an Idea of them: as if he had wrote only for his own Times, without Expectation that his Work would descend to Posterity. However, this very Posterity, which has such an Opinion of itself,

* This Assertion of the Chevalier de Folard may perhaps be contested; it is true, more Examples applicable to the Rules and Maxims of Vegetius may be produced from Livy, than from any other single Author, the Nature and Extent of his Subject furnishing them in Abundance: I own I can see no other Foundation for this Opinion; and we can scarce suppose that Vegetius, who so candidly mentions all the Authors whom he has imitated or abridged, would have omitted Livy, had he been so materially indebted to his Assistance in modelling his Work.

has nothing better to read, nor any better Precepts to follow. I know nothing more instructive: his three first Books are wonderfully so." Treatise on the Attack of Places. I shall not trouble the Reader with more Testimonies in Favour of our Author, who must now speak for himself. His general Maxims are excellent; and the Spirit of Discipline which reigns throughout the Work must sufficiently recommend it to every military Man. His Manner, however, is sometimes dry and obscure; and instead of easy and natural Connexions, almost every Chapter or Section is prefaced with a tiresome and useless Argument of what it contains. His Stile is unequal; in some Places elegant and florid, in others harsh and ungraceful; but on the whole certainly superior to that of the Age in which he lived. His Fondness for Definitions and Etymologies is a Disadvantage to his Work, which is often disagreeably interrupted for their Introduction. The Repetitions continually recurring on the Necessity and Importance of Discipline are somewhat tedious: but if we reflect on the Situation of Affairs at the Time he wrote, and indeed on the Design with which he composed the present Work, we must allow they will admit of some Excuse. The Empire at that Time was almost at its last Gasps; the Roman Armies were in the most wretched Order imaginable, and had suffered many great Defeats: the final Destruction

tion of the State might then have easily been foretold without the Spirit of Prophecy; and in short, it soon after happened. Vegetius, sensible that the Roman Greatness had always ebbed and flowed together with their military Discipline, was convinced that the Empire, then hastening to its Ruin, could no otherwise be saved than by the Revival of it. This Conviction, it is most probable, induced him to undertake the Work, which he began, as he tells us in his Preface to the second Book, of his own Accord: the Emperor Valentinian ordered him to complete it, and he thought the Opportunity too good to be neglected of inculcating the absolute Necessity of Discipline by frequent and earnest Repetition. But the heaviest Imputation on our Author is that Confusion of Time and military Customs which we find throughout the whole Work: he perpetually talks of the Ancients and ancient Usages, but we are often at a Loss to know the Epochas he refers to. Sometimes, by the Ancients, he means the Republic in its Infancy, sometimes in its most flourishing State, and at others the Reigns of the Emperors not much anterior to his own Age. This Charge is not without Foundation, tho' perhaps it would not be impossible to explain the Difficulties: the Attempt, however, would be far from easy, and probably more voluminous than the Work itself. The other Faults abovementioned do not at all affect

affect our Author as a military Writer; as such, his only Fault is too much Brevity and Conciseness.

The Accounts we have of Vegetius are very few and unsatisfactory: we know little more than can be collected from himself. The Title of the following Work, "*Flavii Vegetii Renati, Viri inlustri, ad Valentinianum Augustum Institutorum Rei militaris, ex Commentariis Catonis, Celsi, Trajani, Hadriani, et Frontini, &c.*" informs us that his Name was Flavius Vegetius Renatus, that he was a Person of high Rank, and dedicated his Institutions to Valentinian. In some Manuscripts he has the Title of Count. Raphael of Volterra calls him a Count of Constantinople, in the following Passage. "*Flavius Vegetius Renatus, Comes Constantinopolitanus, scripsit ad Valentinianum Principem Libros quinque, Epitomen videlicet Institutorum Rei militaris, de Commentariis Catonis, Augusti, Trajani, et Hadriani Principum, ac Frontini.*" *Commentar: Urban: L. XX.* An Account which the Critics seem neither to understand nor depend on; this Work being dedicated to Valentinian Emperor of the West. It is thought he was a Roman by Birth, and a Christian. It is not agreed whether the Emperor Valentinian here mentioned was the first, second, or third, of that Name. However, it is most probable it

was not the first, as his Successor Gratian is mentioned by Vegetius, Book. I. Sect: 20: and in the Interval between his Reign and that of Valentinian the third, Rome was taken, plundered, and burnt by Alaric King of the Goths: an Event, of which we should probably have found some Traces in Vegetius, had it happened before the Composition of the present Work. In the same Section he speaks of the Defeat of the Roman Armies by the Goths, and there is Reason to believe he means that unfortunate Battle with those People, fought near Adrianople in Thrace, wherein Valens, Collegue of Valentinian the first in the Empire, lost his Life: some Authors say, he fell into their Hands, and was burnt alive. Hence perhaps it may be concluded, that Valentinian the Second was the Emperor to whom this Work was dedicated. The French Translator of Vegetius farther attempts to prove it from the respective Characters of these three Princes, compared with the Picture drawn by our Author of his Sovereign in the Prefaces of the second and fourth Books; and believes he has ascertained it by the Resemblance of that Picture to the Character of Valentinian the Second; in the Funeral-Oration of that Emperor composed by St. Ambrose, and the Praises bestowed on him by Sozomen and Nicephorus.

It is an Opinion too universally prevalent, that the Difference between the Ancients and Moderns in the executive Part of the Art of War is such, that the Writings of the former on the Subject can be but of little Service to the latter. No one, I imagine, will deny that the Principles of War always have been, and always will be, the same invariably, notwithstanding the Alterations of particular Modes or Weapons; and many of the ancient Institutions are even applicable to these. The modern military Customs in almost every Part of the Service are borrowed from the Greeks and Romans; many without any Change, others with such inconsiderable Alterations as scarce deserve mentioning. To make this more evident, I shall insert some Instances that occur to me at present. Let the Reader compare the modern Method of opening and closing Ranks and Files, the Wheelings, and other Evolutions, and even our very Words of Command, with the Grecian Method in *Ælian's Tactics**. The Egyptians†, who may be stiled the Founders of military Discipline, and from them the Greeks and afterwards the Romans, posted their Officers in the different Corps, and the Corps themselves in the Line, by Seniority: in the Retreat of the ten thousand Greeks, that

* *Ælian de instruend. Aciebus.*

† *Diodorus Siculus. L. I.*

inimitable Model of the Kind, we find the hollow Square, with many other remarkable Particulars: * the Piquet may be traced at the Siege of Plataeæ described in Thucydides†. From the Ancients we derive the Institution of Rounds‡; the Parole and Countersign§; the Distinction of the Ground of the several Corps in an Encampment by Camp-colors||; the Signals to regulate a Decampment**; the Method of drawing Lots for Guards to prevent Treachery††; and of marching with reversed Arms at Funerals‡‡. As for the Regulations for garrisoned Towns, and Garrison-Duty, let the modern Instructions on that Head be compared with Æneas's Treatise on the Defence of Places. At their Sieges they drew Lines of Circumvallation and Countervallation§§, (a Practice not long laid aside) they made their Approaches regularly, and under

* Xenophon, *Cyri Exp.* L. III.

† Thucydides. L. II.

‡ Polybius. *Castramet.* Rom.

§ Æneas. Cap. 24. 25.

|| Polybius. *Castramet.* Rom.

** Do.

†† Æneas. Cap. 22.

‡‡ Virgil. *Æneid.* XI. 93.

§§ Cæsar. *Bell. Gall.* VII.

Cover as much as possible, and thus advanced their Engines to batter the Walls; they carried on Mines as efficacious as the modern wherein Powder is employed, and made their Lodgments on the Breach*. The Besieged, on the other Hand, had their Countermines†; their Artillery was planted on the Ramparts‡; and when the Fortifications were demolished, they intrenched the interior Parts of the Body of the Place§. The fundamental Maxims in Fortification are the same now as in their Times: they built their Walls with saliant and reentering Angles with Towers at the Extremeties, that every Part might be reciprocally discovered and flanked||; and the Distance between the Towers was regulated by the Reach of their Arrows and other missive Weapons, as now by Musket-Shot, in order that they might be defended by them**. These Instances may suffice, without troubling the Reader with a larger Collection. We may safely assert, that the most distinguished by superior military Qualifications among the Moderns

* Vegetius. IV, 15, 16, 24.

† Do, IV. 20.

‡ Do. IV. 27.

§ Thucydides. L. II.

|| Vegetius. IV. 2.

** Vitruvius. I. 5.

have been those who made the Ancients their Study, and formed themselves on their Model. The Works of Turenne, Montecuculli, Folard, &c. evince the Esteem and Value those great Men entertained for the military Writings of the Ancients: and it is well known, that the Prince of Orange, the Prince of Parma, and the Marquis of Spinola, formed all their Sieges, wherein they distinguished themselves so much, after Cæsar's Siege of Alesia. Many other similar Instances will occur on the least Reflection. There are many useful Maxims in our Author's fourth Book relative to Sieges, the Branch in which the Invention of Fire-Arms seems to have occasioned the greatest Alterations. The Long-Bow, the Sling, and the various Kinds of missive Weapons, were perhaps not at all inferior to our Small-Arms; and the Balistæ, Catapultæ, Onagri, and Scorpions, were as terrible and destructive as our Cannon.

That my Intentions may not be mistaken, I think it proper to mention, that what I have said is in Order to shew that Classical Learning is as necessary in the Profession of Arms, as in any other whatsoever; and that the Study of the ancient military Writers is essentially requisite. The Affinity, to say nothing more, of ancient and modern Discipline confirms this Observation: and as our present System is so nearly copied from
Antiquity

Antiquity, there is all the Reason imaginable to believe that many other important and serviceable Institutions might still be introduced into the Service by a careful and judicious Examination of its valuable Remains. Xenophon, Polybius, Cæsar, and Vegetius, will always afford sufficient Employment for a military Man. I know not whether the military Science has not suffered more by the Loss of the greatest Part of the Works of Polybius, than it ever can retrieve by the other Authors now extant. His Dissertations on the Roman Castrametation, and on the Macedonian Phalanx, make us but too sensible of the Loss we have sustained. His Abilities as an Historian and a Statesman, are great; but when he speaks of military Affairs, he exceeds himself: nor can it be wondered at, as by his Precepts and Instructions, he formed the greatest General of the Age, Scipio Africanus, Vegetius excepted, the ancient Writers, whose Works are extant, have handled only particular Branches. Æneas treats only of the Defence of Places; Hyginus of Castrametation; Frontinus and Polyænus of Stratagems; Arrian and Ælian of the Grecian Tactics. These are all very valuable Works: there are some others of later Ages, as the Treatises of the Emperors Leo and Mauritius. We find the Names of Stratocles, Hermias, Cineas the Thessalian, Pyrrhus King of Epirus, Alexander his Son, Clearchus, Pau-

fanias, Evangelus, Eupolemus, Iphicrates, Posidonius, and Brion, among the Greek military Writers, whose Works, with many others, are entirely lost: and among the Romans, those of M. Porcius Cato, L. Cincius Alimentus, Cornelius Celsus, Æmilius Macer, Arrius Menander, and Terruntenus Paternus, who have shared the same Fate. The Loss of some of these Authors is imputed to their Abridgers; and if with Reason, Vegetius may possibly deserve some Share of Blame, for abridging, as he himself informs us, Cato, Celsus, Paternus, and Frontinus.

As to modern military Writers, France has certainly produced the best and greatest Number; but in Justice to our own Country, I cannot help taking Notice of an Observation of the late General Bland in the Preface to his Treatise of military Discipline. He says that “from the great Reputation of the British Arms, Men would be apt to imagine, that several Treatises of the Art of War were to be met with in our Language; but when they come to enquire, they will be strangely surpris’d to find nothing of this Kind of our native Growth, that I know of, except what has been left by the Earl of Orrery.” I do not pretend to contradict this Remark without producing my Authorities. Many military Treatises have been wrote in
English

English since the Reign of Queen Elisabeth, especially, as might be expected, during the civil Commotions in the Time of King Charles the first. The early Translation of Vegetius in 1572, which I shall presently mention more particularly, shows that our Ancestors were not entirely inattentive to this Point. The following Authors I have seen, tho' I believe most of them are now scarce. The Practice, Proceedings, and Lawes of Armes; by Matthew Sutcliffe; black Letter, London, 1593.—Military Instructions for the Cavalry, by Captain John Cruso; who also translated the Lord of Praissac's military Discourses, and the Duke of Rohan's Complete Captain, printed at Cambridge in 1639 and 1640.—Treatise against the Use of the Pike, by Daniel Lupton, 1642.—Militarie Discipline, or the young Artillery-Man, by Lieutenant Colonel William Barriffe; London, 1643.—Instructions for the Discipline of the Army, by the Earl of Strafford.—Instructions for the Foot, by Sir Thomas Kellie.—Complete Body of the Art of War, by Lieutenant Colonel Elton, with a Supplement by Captain Rud.—Practice of Artillery by Norton.—Observations on military Affairs; by General Moncke, (afterwards Duke of Albemarle) London, 1671.—Pallas Armata, or military Essays of the ancient Grecian, Roman, and modern Art of War; by Sir James Turner, London, 1683. These Au-
thors

thors are mostly well worth examining: they tell us expressly there was no Want of military Books in their Time for the Assistance of those who desired Information: I have seen several others, but do not recollect them particularly enough to mention. Here we may observe, that our early Writers on military Discipline had no Thoughts of proposing other Models for Imitation than the Greeks and Romans.

The Study of War, besides its own intrinsic Amusement, is inseparably connected with History, the most engaging as well as useful of all Studies. Vegetius considered in this View, I mean with Respect to History, will be acceptable to all Lovers of Literature: military Affairs and the Operations of War have so great a Share in every Part of History, particularly that of the Greeks and Romans, that some Knowledge of them may be reckoned essential to it. And the military Merit of Vegetius is so universally acknowledged, that I hope I may, without Impropriety, add his Name to a short, but well-chosen Catalogue of a Soldier's Library, given us by the Spectator, after the Abbè de Pluche, consisting of the New Testament, Cæsar, and Euclid.

There remains to add a Word or two relative to the Translation. I have endeavoured to render the Original as faithfully as I could, but
have

have taken some Liberties, for which it may be necessary to give the Reasons. I have often varied, and sometimes omitted the continual Prefaces at the Heads of the Sections, as they only interrupt the Subject, without contributing either to Ornament or Use. I have left out several Definitions and Etymologies, both on the above-mentioned Accounts, and because they seldom answer the Original when translated into another Language, but have always inserted them in the Notes. Vegetius, in the Preface to the first Book, tells us he divided this Work into Chapters or Sections; the short Prefaces at the Beginning of the Chapters seem to ascertain them to be the Divisions originally made by the Author, but the Titles at present affixed are universally rejected as spurious: their Composition is very indifferent, some almost as long as the Chapters themselves, and others of little Affinity. I have therefore taken the Liberty to alter them, and have thrown them into the Margin of each Section. The French Translator has divided each Book into three, four, or five Chapters, and subdivided them again into Sections: but I can see no Reason for the first Kind of Division. In the common printed Editions of Vegetius there are but four Books, the last of which comprehends both the Attack and Defence of Places, and the Marine; but the Authors who mention Vegetius, generally agree that he composed five

Books

Books, and their Testimony is confirmed by several Manuscripts, wherein the latter is separated from the former: and indeed the Subject itself, and the short Preface before the Treatise on the Marine, seem to warrant the Separation, which for these Reasons I have observed in the Translation. Some Notes were necessary, but I have reduced them into as small a Number as possible: if the Reader has a Taste for grammatical Disquisitions, I can recommend him to Stewechius and Scriverius, where he will find them in the true German Taste. However, to give the former Critic his Due, his Commentary on our Author is full of Labor and Learning; but as it is entirely in the Style of the Grammarian, can be of little Use to the military Reader, excepting several Customs of the Ancients in the different Branches of the Service interspersed in it. In the Difficulties relative to military Affairs, which are not few in the Course of the Work, no Assistance can be expected from him.

Vegetius was first printed at Rome in 1478: and I have seen a Translation into English made almost two hundred Years ago, in the Reign of Queen Elisabeth, in small Quarto and the black Letter, with the following Title. “ The foure Bookes of Flavius Vegetius Renatus, briefely contayninge a plaine Forme and perfect Knowledge of Martiall Policye, Feates of Chivalrye, and

and whatsoever pertayneth to Warre. Translated out of Latine into Englishe, by John Sadler. Anno, 1572." This Translator, in his Dedication to the Earl of Bedford, one of Queen Elizabeth's ~~major~~ ^{chief} Counsellors and Knight of the Garter, says, " that he undertooke the Worke at the Request of the right worshipful Sir Edmond Brudenell Kt: and that this worthy Author had been before translated by the Italians, Almaines, and Frenchmen, most diligently in their owne peculiar Languages." The Author has often mistaken the Original, and his Work has little Value but that of Antiquity.

When I began the Work, I intended to have illustrated the Roman military Customs, Habits, Arms, Camps, Engines, &c. by a Series of Plates from the different Remains of Antiquity, and to have exemplified the Maxims and Institutions of our Author by the most remarkable and well-known Events either of ancient or modern Times: but the Time and Expence attending the former, and the Prolixity of the latter, Design, soon obliged me to lay them both aside. Should this Attempt, however, meet with Approbation, I may hereafter undertake the few remaining military Treatises of the Ancients, which, tho' short, are not unworthy of Attention. In the mean Time, I cannot help mentioning the

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Difficulties

Difficulties I have met with in this Work, but with no other View, than that of requesting the Reader's Indulgence for the Errors he may discover in the Translation.

London. Jan. 1767.

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MILITARY INSTITUTIONS

O F

VEGETIUS.

B O O K I.

T O T H E

EMPEROR VALENTINIAN.

P R E F A C E.*

IT has been an old Custom for Authors to offer their Princes the Fruits of their Studies in the Belles Lettres, from a Persuasion, that no Work can be published with Propriety but under the Auspices of the Emperor†, and that the

* This Work in the Original has different Titles ; *De Re militari* ; *Epitoma Rei militaris* ; *Epitoma Institutorum Rei militaris*.

† Auspices of the Emperor.] The Original here is various ; *Nisi post Deum faverit Imperator* ; *Nisi prænotum fuerit Imperatori*, or *Nisi Prius* ; *Nisi prius Voto faverit Imperator*.

B

Knowledge

Knowledge of a Prince should be the more general, and of the most important Kind, as its Influence is so sensibly felt by all his Subjects. We have many Instances of the favorable Reception which Augustus and his illustrious Successors conferred on the Works presented to them; and this Encouragement of the Sovereign made the Sciences flourish. The Consideration of Your Majesty's* superior Indulgence for attempts of this Sort, induced me to follow this Example, and makes me at the same Time almost forget my own Inability when compared with the ancient Writers. One Advantage, however, I derive from the Nature of this Work, as it requires no Elegance of Expression, or extraordinary Share of Genius, but only great Care and Fidelity in collecting and explaining, for public Utility, the Instructions and Observations of our old Historians on military Affairs, or of those who have wrote expressly concerning them. My Design in this Treatise is to exhibit in some

* Majesty.] Orig. Clementiam vestram. Vegetius gives the Emperor a great Variety of Titles. We meet with Tranquillitas, Perennitas, Sereuitas, Celsitudo, & Majestas. As the latter is more than once used by our Author, and is the most consonant to modern Custom, I have followed the French Translator, in substituting it to all the others throughout the Work.

Order*

Order * the peculiar Customs and Usages of the Ancients in the Choice and Discipline of their new Levies : nor do I presume to offer this Work to Your Majesty from a Supposition that You are not acquainted with every Part of its Contents, but that You may see, that the same salutary Dispositions and Regulations, which Your own Wisdom alone prompts You to establish for the Happiness of the Empire, were formerly observed by the Founders thereof ; and that Your Majesty may find with Ease in this Abridgment whatever is most useful on so necessary and important a Subject.

* In some Order.] Orig. Per quosdam Gradus & Titulos. It appears, by these Expressions, that Vegetius himself divided this Work into Chapters or Sections ; but, as I observed in the Preface, the Titles now affixed to them are universally looked upon as spurious.

B O O K I.

SECTION I. The Roman Discipline the Cause of their Greatness. II. Choice of the Provinces for recruiting. III. Whether the City or Country furnishes best Soldiers. IV. Proper Age for Recruits. V. Their Size. VI. Signs whereby their Qualities may be discovered. VII. Trades proper or improper for the Levies. VIII. The military Mark. IX. Recruits to be taught the military Step, and the Exercises of Running and Leaping. X. To learn to swim. XI. The Post-Exercise. XII. Recruits to be taught not to cut, but thrust with the Sword. XIII. To learn the Exercise called Armatura. XIV. To be taught the Use of missive Weapons. XV. To be instructed in the Use of the Bow. XVI. Of the Sling. XVII. Of the loaded Javelin. XVIII. Recruits to be taught to vault. XIX. To be accustomed to carry Burdens. XX. Arms of the Antients. XXI. Intrenched Camps. XXII. Proper Situation of a Camp. XXIII. Its Form. XXIV. Its Intrenchments. XXV. Method of intrenching in Presence of the Enemy. XXVI. Evolutions. XXVII. Monthly Marches. XXVIII. Conclusion.

SECT. I.
The Roman
Discipline
the Cause of
their Great-
ness.

VICTORY in War depends not absolutely on Numbers or mere Courage; Conduct and Discipline only will ensure it. The Romans, we find, owed the Conquest of the World to no other Cause but a continual Exercise

cise of Arms, an exact Observance of Discipline in their Camps, and an unwearied Cultivation of the other Arts of War. Without these, what would the inconsiderable Numbers the Roman Armies consisted of, have availed against the Multitudes of the Gauls*? Or with what Success could their small Size have been opposed to the prodigious Stature of the Germans†? The Spaniards surpassed us not only in Numbers, but in Strength of Body. We were always inferior to the Africans in Wealth, and the Resources of Subtilty and Stratagem: and the Greeks, beyond Dispute, were far superior to us in a Genius for Arts, and all Kinds of Knowledge. But to all these Advantages the Romans opposed an unusual Care in the Choice of their Levies, and in their Instruction in the Use of their Arms: They thoroughly understood the Importance of hardening them by continual Practice, and of training them in the Field of Mars to every Evolution that might happen in the Line and in Action; nor were

* Multitudes of the Gauls.] See the Beginning of the Second Book of Cæsar's War in Gaul.

† Prodigious Stature of the Germans.] This is taken Notice of by Cæsar, Plutarch, Tacitus, and other Authors. Cæsar tells us, Book II. that at one of his Sieges, the Gauls made a Jest of the small Size of his Men. It may be proper here to observe, that the Stature of the Romans was of the middle Size, not remarkable for either Extreme.

they

they less strict in punishing Idleness and Sloth. The Courage of a Soldier is heightened by his Knowledge of his Profession, and he wants but an Opportunity to execute what he is convinced he has been perfectly taught. A Handful of Men, inured to War, proceed, as it were, to certain Victory, while on the contrary, numerous Armies of raw and undisciplined Troops are but Multitudes of Men dragged to Slaughter.

II. Choice
of the Pro-
vinces for
recruiting.

To treat our Subject with some Method, we shall first examine what Provinces or Nations are to be preferred for supplying the Armies with Recruits. It is certain that every Country produces both brave Men and Cowards; but it is equally as certain, that some Nations are naturally more warlike than others, and that Courage, as well as Strength of Body, depends greatly on the Influence of the different Climates. It is the Opinion of learned Men *, on this Head, that the

* It is the Opinion of learned Men.] This Opinion, though perhaps not strictly reconcileable to Truth, was prevalent among the Antients. We find it mentioned by Lucan, Book I. 453.

“ Populi, quos despicit Artos,
“ Felices Errore suo, quos ille Timorum
“ Maximus haud urget Leti Metus : inde ruendi
“ In Ferrum Mens prona Viris, Animæque capaces
“ Mortis ; & ignavum redituræ parcere Vitæ.

And

the Nations which lie near the Sun, and are consequently of an adust Complexion, have a greater Share of Genius and Knowledge, but a less Quantity of Blood; to this they ascribe their Want of Resolution to engage an Enemy in close Fight, and impute their Dread of Danger to the Fear of losing that Blood of which Nature has been so sparing. On the other Hand, the Northern People, far removed from the Heat of the Sun, are indeed endued with less Discretion, but from a Redundancy of Blood, have a much greater Share of Intrepidity in the Field. Hence it appears, that the more temperate Climates are the most proper for furnishing the new Levies; as in them we may expect to find a Sufficiency of Blood to inspire them with Contempt of Wounds and Death, and at the same Time that Spirit of Prudence and Discretion which keeps up proper Order and Discipline in the Camp, and is so necessary in concerting as well as executing every military Undertaking.

We shall next examine, whether the City or the Country produces the best and most serviceable Soldiers. No one, I imagine, can doubt

III. Whether
the City or
Country fur-
nishes best
Soldiers.

And in another Place,

- " Omnis in Arctois Populus quicunque Pruinis
- " Nascitur, indomitus Bellis, & Martis Amator.
- " Quidquid ad Eoos Tractus, Mundique Teporem
- " Labitur, emollit Gentes Clementia Cœli.
- " Illic et laxas Vestes, & fluxa Virorum
- " Velamenta vides.

B. VIII. 363.

that

that the Peasants are the most fit to carry Arms, who from their Infancy have been exposed to all Kinds of Weather, and brought up to the hardest Labor: they are able to endure the greatest Heat of the Sun, are unacquainted with the Use of Baths, and are Strangers to the other Luxuries of Life: they are artless, content with little, inured to all Kinds of Fatigue, and prepared in some Measure for a military Life by their continual Employment in their Country-Work, in handling the Spade, digging Trenches, and carrying Burdens. In Cases of Necessity, however, they are sometimes obliged to make Levies in the Cities; and these Men, as soon as enlisted, should be taught to work on Intrenchments, to march in the Ranks, to carry heavy Burdens, and to bear the Sun and the Dust. Their Meals should be coarse and moderate; they should be accustomed to lie sometimes in the open Air, and sometimes in Tents. After this, they should be instructed in the Use of their Arms; and, if any long Expedition is intended, they should be kept encamped * as much as possible,

* Kept encamped as much as possible.] Orig. in *Agrariis detinendi sunt*. The *Agrariæ* were properly Frontier-Stations, where the Roman Armies always intrenched themselves. The Word here seems to mean Camps in general, in Opposition to City-Quarters. It occurs again in this Sense, in the last Section of the third book; but in the 22d Section of the 2d Book, it is used for the Grand Guards, or advanced Guards,

possible, out of the Way of the Temptations of the City; by which Precautions, their Minds as well as their Bodies will be properly prepared for the Service. I am sensible that in the first Ages of the Republic, the Romans always raised their Armies in the City itself, but this was at a Time when there were no Pleasures, no Luxuries to enervate them. The Tiber was then their only Bath †, wherein they refreshed themselves, after their Exercises and Fatigues in the Field, by swimming. In those Days, the same Man was both Soldier and Husbandman, who, when Occasion requir'd, laid aside his Tools and put on the Sword. The Truth of this is confirmed by the Instance of Quintius Cincinnatus, who was following the Plow when they came to offer him the Dictatorship. The chief Strength of our Armies should then be recruited from the Country; for it is certain, that the less a Man is acquainted with the Indulgences and Sweet Life, the less Reason he has to be afraid of Death.

Guards, without the Limits of the Camp; and in the 8th Section of the 3d Book, it signifies Out-Posts established for the Security of Convoys, &c.

* The Tiber was then their only Bath.] Orig. *Sudorem Cursu et campestri Exercitio collectum nando Juventus abluabat in Tiberi.* I have here added a Word or two, to render the Sense clearer and stronger.

IV. Proper
Age for Re-
cruits.

If we follow the ancient Practice, the proper Time for inlisting the Youth into the Soldiery is at their Entrance into the Age of Puberty : at this Time of Life Instructions of every Kind are more quickly imbibed, and more lastingly imprinted on the Mind. Besides this, the indispensable military Exercises of Running and Leaping must be acquired before the Limbs are too much stiffened by Age : for it is Activity, improved by continual Practice, which forms the useful and good Soldier. Formerly, says Sallust*, the Roman Youth, as soon as they were of an Age to carry Arms, were trained in the strictest Manner in their Camps to all the Fatigues and Exercises of War. For it is certainly better that a Soldier, perfectly disciplined, should, thro' Emulation, repine at his not being yet arrived at a proper Age for Action, than have the Mortification of knowing it is past. A sufficient Time is also requisite for his Instruction in the different Branches of the Service : for it is no easy Matter to train the Horse or Foot Archer, or to form the Legionary Soldier to every Part of the Exercise; to teach him not to quit his Post, to keep the Ranks, to take a proper Aim and throw his missive Weapons with Force, to sink Trenches, and to plant Palisades; how to manage his Shield, glance off the Blows of the

* Formerly, [says Sallust.] This Passage is in the Beginning of the Conspiracy of Cataline.

Enemy,

Enemy, and how to give and parry a Stroke with Dexterity. A Soldier, thus perfect in his Business, so far from shewing any Backwardness to engage, will be eager for an Opportunity of signalising himself.

* We find the Ancients very fond of procur-^{V. Their Size,}ing the tallest Men † they could for the Service, since the Standard for the Cavalry of the Wings, and for the Infantry of the first Legionary Cohorts, was fixed at six Feet, or at least at five Feet ten Inches. This scrupulous Exactness might easily be kept up in those Times when such Numbers followed the Profession of Arms, and before it was the Fashion for the Flower of the Roman Youth to devote themselves to the civil Offices of the State. But, when Necessity requires it, the Height of a Man is not to be regarded so much as his Strength: and for this we

* The first Sentence of this Section in the Original runs thus: *Proceritatem Tironum à Consule Mario scio semper exactam, ita ut senos Pedes, &c.* The Text is much corrupted, and the Words *à Consule Mario* are generally rejected by the Commentators, for which Reasons I have not translated them. The Roman Foot was somewhat less than ours.

† Tallest Men.] Pyrrhus's Directions to a Superintendent of his Levies are remarkable. "Tu grandes elige, ego eos fortes reddam." Frontinus. IV. 1.

have the Authority of Homer*, who tells us, that the Deficiency of Stature in Tydeus was amply compensated by his Vigor and Courage.

VI. Signs
whereby
their Quali-
ties may be
discovered.

Those employed to superintend new Levies should be particularly careful in examining the Features of their Faces, their Eyes, and the Make of their Limbs, to enable them to form a true Judgment, and chuse such as are most likely to prove good Soldiers. For Experience assures us that there are in Men, as well as in Horses and Dogs, certain Signs by which their Virtues may be discovered; and Virgil † extends this Observation even to Bees, where he speaks of their Kings :

- “ There are two Kinds; superior one by far,
 “ Of lively Color, and of noble Air,
 “ Well-shap’d, and pleasing to the sight ap-
 “ pears.
 “ The other, dull, a heavy Aspect wears,
 “ Sluggish and slow, a monstrous Belly trails,
 “ And horrid Sloth o’er all his Frame pre-
 “ vails.”

The young Soldier, therefore, ought to have a lively Eye, should carry his Head erect, his Chest

† Homer.] Τυδεὺς τοι μικρὸς μὲν ἐστὶ δῖμας, ἀλλὰ μαχητής.
Iliad, E. 501.

† Virgil.] *Georg.* 4. 92.

should

should be broad, his Shoulders muscular and brawny, his Fingers long, his Arms strong *, his Waist small, his Shape easy, his Legs and Feet rather nervous than fleshy. When all these Marks are found in a Recruit, a little Height may be dispensed with; as it is of much more Importance that a Soldier should be strong than tall.

In chusing Recruits Regard is to be had to their Trade. Fishermen, Fowlers, Confectioners, Weavers, and in general all whose Professions more properly belong to Women †, should,

VII. Trades
proper or
improper
for the Le-
vies.

* His Fingers long, his Arms strong.] The general Reading here is, *valentibus Digitis, longioribus Brachiis*; and afterwards, *exiliior Cruribus*; but I have followed that of *valentibus Brachiis, Digitis longioribus*; *exiliior Clunibus*. It may be observed, that the Romans, to avoid serving in the Army, had the Custom of disabling themselves, by cutting off their Fingers. Valerius Maximus gives us an Instance of this in the Person of C. Vettienus, who was punished by Confiscation of his Estate, and perpetual Imprisonment, B. VI. 3.

† Professions more properly belong to Women.] Orig. *Ad Gynæcea pertinens*. The Gynæcea were the Womens Apartments in the Houses of the Antients, where they employed themselves in Works suitable to their Sex. We find in the *Notitia Imperii*, that there were Buildings of this Appellation in several Provinces of the Empire, particularly in Gaul, designed to supply the Emperor's Household and the Army with Clothing, Stuffs, and other such Manufactures. Vegetius, perhaps, means the latter.

in

in my Opinion, by no Means be admitted into the Service. On the contrary, Smiths, Carpenters, Butchers, and Huntsmen * are the most proper to be taken into it. On the careful Choice of the Levies depends the Welfare of the Republic, and the very Essence of the Roman Empire and of its Power is so inseparably connected with this Charge, that it is of the highest Importance, not to be intrusted indiscriminately, but only to Persons whose Fidelity can be relied on. The Ancients considered Sertorius's † Care in this Point as one of the most eminent of his military Qualifications. The Soldiery, to whom the Defence of the Empire is consigned, and in whose Hands is the Fortune of War, should, if possible, be of reputable Families, and unexceptionable in their Manners. Such Sentiments as may be expected in these Men will make good Soldiers : a Sense of Honor, by preventing them from behaving ill, will make them

* Huntsmen.] Orig. Cervorum Aprorumque Venatores.

† Sertorius.] This General, so famous for his military Abilities, was one of Marius's Adherents in the civil War between him and Sylla : when the latter advanced to Rome, Sertorius fled into Lusitania ; and with about eight thousand Men defeated, at different Times, four Roman Generals, at the Head of one hundred and twenty thousand foot, and seven thousand horse. Pompey the Great was then sent against him ; and soon after he was treacherously killed by Perpenna. See his Life in Plutarch.

victorious.

victorious. But what Good can be expected from a Man by Nature a Coward, tho' ever so well disciplined or tho' he has served ever so many Campaigns? An Army raised without proper Regard to the Choice of its Recruits, was never yet made good by Length of Time : and we are now convinced by fatal Experience, that this is the Source of all our Misfortunes. So many Defeats can only be imputed to the Effects of a long Peace which has made us negligent and careless in the Choice of our Levies ; to the Inclination so prevalent among the better Sort in preferring the civil Posts of the Government to the Profession of Arms ; and to the shameful Conduct of the Superintendants, who, thro' Interest or Connivance, accept any Men which those who are obliged to furnish Substitutes for the Soldiery chuse to send, and admit such into the Service as the Masters themselves would not even keep for Servants. Whence it appears, that a Trust of such Importance should be committed to none but Men of Merit and Integrity.

The Recruit, however, should not receive the military Mark * as soon as enlisted ; he must first

VIII. The
military
Mark.

† The military Mark.] Orig. Punctis Signorum inscribendus est Tiro. This Mark, mentioned again in the fifth Section of the following Book, was imprinted on the Hands of the Soldiers, either with a hot Iron, or in some other Manner. It was indelible, according to the Expression in the abovementioned Passage, victuris in Cute Punctis.

be

be tried if fit for the Service ; whether he has sufficient Activity and Strength ; if he has Capacity to learn his Duty, and whether he has a proper Degree of military Courage. For many, tho' promising enough in Appearance, are found very unfit upon Trial ; these are to be rejected and replaced by better Men ; for it is not Numbers, but Bravery, that carries the Day. After their Examination, the Recruits should then receive the military Mark, and be taught the Use of their Arms by constant and daily Exercise. But this essential Custom has been abolished by the Relaxation introduced by long Peace. We cannot now expect to find a Man to teach what he never learned himself. The only Method, therefore, that remains of recovering the ancient Customs is by Books, and by consulting the old Historians : but they are of little Service to us in this Respect, as they only relate the Exploits and Events of Wars, and take no Notice of the Objects of our present Enquiries, which they considered as universally known. The Lacedæmonians, it is true, the Athenians, and some other Greek Authors, have left us several Treatises on Tactics ; but our Business, as Romans, is to examine into the Discipline of our Ancestors only, the Excellence of which, from a very confined Territory, extended their Empire almost over the whole World. These Reasons induced me to undertake a faithful Abridgement
of

of the several military Works of Cato the Cenſor *, Cornelius Celfus †, and Frontinus ‡; thoſe of Paternus § that ſtrenuous Aſſertor of Diſcipline and martial Law, and of the Ordinances of the Emperors Auguſtus, Trajan, and Adrian. I advance nothing on my own Authority, but confine myſelf entirely to Extracts from the abovementioned Authors.

* Cato the Cenſor.] He wrote ſeveral military Treatiſes, ſome Fragments of which are extant in Feſtus, Nonius Marcellus, and others.

† Cornelius Celfus.] This Author wrote on War, Rhetoric, Agriculture, and Medicine. See Quintilian, B. 12. Cap. ult. He flouriſhed about the Time of Tiberius.

‡ Frontinus.] Sextus Julius Frontinus lived in the Reigns of Nerva and Trajan. He was the Author of ſeveral military Works; ſome of which, in all Probability, were dedicated to Trajan, as we may conjecture from a Paſſage in our Author, B. II. Sect. 3. A Collection of military Stratagems is ſtill extant in four Books, and a Treatiſe on the Aqueducts of Rome in two. Stewechiuſ ſuppoſes him to be the ſame Perſon mentioned by Tacitus, Hiſt. 4. 39: and again in the Life of Agricola, C. 17. where he gives him the character of an excellent Officer.

§ Paternus.] Terruntenuſ Paternuſ was Præfeſt of the Prætorian Guards in the Reign of Commoduſ, was concerned in a Conſpiracy againſt that Emperor, and loſt his Life on that Account. See Lampridius, Vit. Commodi. Some Fragments of this Author ſtill remain in the Work aſcribed to Papinian, and in other Writers.

IX. Re-
cruits to be
taught the
military
Step, and
the Exercises
of running
and leaping.

The first Thing the Soldiers are to be taught, is the military Step, which can only be acquired by a constant Practice of marching quick and together: nor is any Thing of more Consequence either on the March or in the Line than that they should keep their Ranks with the greatest Exactness. For Troops who march in an irregular and disorderly Manner, are always in great Danger of being defeated. They should march with the common military Step twenty Miles in five Summer-Hours *, and with the full Step, which is quicker, twenty four Miles in the same Number of Hours. If they exceed this Pace, they no longer march but run, and no certain Rate can be assigned. But the young Recruits in particular must be exercised in Running, in Order to charge the Enemy with greater Vigor; occupy, on Occasion, an advantageous Post with greater Expedition, and prevent the Enemy in their Designs upon the same; that they may, when sent to reconnoitre, advance with Speed, return with greater Celerity, and more easily come up with the Enemy in a Pursuit. Leaping is another very necessary Exercise, to

* Summer-Hours.]. The Summer and Winter Hours of the Romans were different. Their Days were divided into twelve Hours, sometimes longer, and sometimes shorter, according to the Seasons of the Year. The six first were from Sun Rising till Noon; and the six last from Noon till Night.

enable

enable them to pass Ditches or embarrassing Eminences of any Kind without Trouble or Difficulty. There is also another very material Advantage to be derived from these Exercises in Time of Action; for a Soldier who advances with his Javelin, running and leaping, dazzles the Eyes of his Adversary, strikes him with Terror, and gives him the fatal Stroke before he has Time to put himself on his Defence. Sallust *, speaking of the Excellence of Pompey the Great in these Particulars, tells us, that he disputed the Superiority in Leaping with the most active, in running with the most swift, and in Exercises of Strength † with the most robust. Nor would he
ever

* Sallust.] This Passage is not to be found in any of his Works now extant.

† Exercises of Strength.] Orig. cum validis Vestis certabat. It is not certainly known what is meant by Vestis: we meet with it again in the 4th Section of the 3d Book, where our author is speaking of the different Exercises in which Troops should be employed: “ad Sagittas jaciendas, ad Missilia dirigenda, ad jactandos Lapidēs, vel Fundavel Manu, ad Armaturæ Gestum, ad Vestes (jactandos) pro Similitudine Gladiorum, punctum cæsumque feriendo, multo diu, usque ad Sudorem sunt frequentissime detinendi.” It must be here observed, that the Word in the Parenthesis is not in the best Manuscripts. At first Sight, it seems as if the wooden Swords mentioned B. I. Sect 11th, were meant by this Expression: but Varro, de Lingua Latina, Lib. 4, understands it of the Post itself, against which

ever have been able to have opposed Sertorius with Success, if he had not prepared both himself and his Soldiers for Action by continual Exercises of this Sort.

X. To learn
to swim.

Every young Soldier, without Exception, should in the Summer-Months be taught to swim; for it is sometimes impossible to pass Rivers on Bridges, but the flying and pursuing Army both are often obliged to swim over them. A sudden Melting of Snow or Fall of Rain often makes them overflow their Banks, and in such a Situation, the Danger is as great from Ignorance in Swimming as from the Enemy. The ancient Romans, therefore, perfected in every Branch of the military Art by a continued Series of Wars and Perils, chose the Field of Mars as the most commodious for their Exercises on Account of its Vicinity to the Tiber, that the Youth might therein wash off the Sweat and Dust, and refresh themselves after their Fatigues, by swimming. The Cavalry also as well as the Infantry, and even the Horses and the Servants of the Army * should be accustomed to this Ex-

the Soldiers were taught to fence, and quotes this Passage, *Milites ad Vestim, quem circumeunt ludentes.* See Stewechius's Note on the abovementioned Sentence. I have made Use of general Terms in the Translation.

* Servants of the Army.] Orig. *Lixæ, quos Galearios vocant,*

exercit,

ercise, as they are all equally liable to the same Accidents.

We are informed by the Writings of the Antients, that, among their other Exercises, they had that of the Post *. They gave their Recruits
round

* The Post.] Orig. ad Palum. This Exercise was also called Palaria. Juvenal mentions it, Sat. 6. 247, speaking of the Women in his Time who fought in public :

—— Quis non vidit Vulnera Pali,
Quem cavat assiduis Sudibus, Scutoque laceſſit,
Atque omnes implet Numeros ?

Aspice quo Fremitu monstratos perferat Ictus,
Et quanto Galeæ curvetur Pondere, quanta
Poplitibus ſedeat, quam denſo Fascia Libro.

See also Hirtius's Commentary of Cæſar's War in Africa, C. 71.

This Custom ſeems to have been in Uſe not long ago amongſt us, as we find the Word Quintain in Shakeſpeare, As You like it, Act I. Sc. 7, ſignifying, according to Commentators, a Mark or Poſt of this Kind.

Since I wrote the above, I find in Dr. Plot's Natural History of Oxfordſhire, that an Exercise of this Kind ſubſiſted in his Time in that County : but with this Difference, that from a military Exercise, it had degenerated into a Country Diverſion. For the particular Deſcription, I refer the Reader to that Author, Chap. 8. It was called Running at the Quinten, Quintain, or Quintel. Among the Romans, who may juſtly be ſuppoſed to have brought this Cuſtom into Britain, the Poſt for this Purpoſe was ſet

round Bucklers woven with Osiers, twice as heavy as those used on real Service, and wooden Swords of double the Weight of the common ones. They exercised them with these at the Post both Morning and Afternoon. This is an Invention of the greatest Use not only to Soldiers, but also to Gladiators: and no Man of either Profession ever distinguished himself in the Circus or Field of Battle, who was not perfect in this Kind of Exercise. Every Soldier, therefore, fixed a Post firmly in the Ground, about the Height of six Feet: against this, as against a real Enemy, the Recruit was exercised with the abovementioned Arms, as it were with the common Shield and Sword, sometimes aiming at the Head or Face, sometimes at the Sides, at others endeavoring to strike at the Thighs or Legs. He was instructed in what Manner to advance and retire, and in short how to take every Advantage of his Adversary; but was above all particularly cautioned not to lay himself open to his Antagonist while aiming his Stroke at him,

XII. Recruits to be taught not to cut but thrust with the Sword.

They were likewise taught not to cut but thrust* with their Swords; for the Romans not only

up in one of the transverse Streets of the Camp, called Quintana, and hence the Exercise received its Name.

* Not to cut but thrust.] The Romans adopted the Spanish Sword, as best calculated, by its Form, for this Use
it

only made a Jest of those who fought with the Edge of that Weapon, but always found them an easy Conquest. A Stroke with the Edge, tho' made with ever so much Force, seldom kills, as the vital Parts of the Body are defended both by the Bones and Armor. On the contrary, a Stab, though it penetrates but two Inches, is generally mortal*. Besides, in the Attitude of striking, it is impossible to avoid exposing the right Arm and Side; but on the other Hand, the Body is covered while a Thrust is given, and the Adversary receives the Point before he sees the Sword. This was the Method of fighting principally used by the Romans, and their Reason for exercising Recruits with Arms of such a Weight at first, was, that when they came to carry the common ones so much lighter, the great Difference might enable them to act with greater Security and Alacrity in Time of Action.

The new Levies are also to be taught, by the Masters at Arms, † that particular Exercise called

XIII. To learn the Exercise called Armatura.

it was short, with sharp Edges, and pointed. See Polybius, B. III.

* Mortal.] The Orig. adds, *Necesse est enim, ut vitalia penetret, quidquid immergitur*; which seems unnecessary after what goes before.

† Masters at Arms.] Orig. *Campiditores*. See Book III. Sect. 6.

Armatura*.

*Armatura**, as it is still partly kept up among us. Experience even at this Time convinces us, that

* Exercise called *Armatura*.] Orig. *Præterea illo Exercitii Genere, quod Armaturam vocant, & a Campidoctoribus traditur, imbuendus est Tiro.* There is great Difficulty in the Word *Armatura*. I have examined many Authors, to endeavor to find what Exercise is intended by it, but cannot meet with any satisfactory Explanation. Steuchius confounds it with the *Palatia*, says a great Deal upon it, and all he says, perplexes still more. In other Passages it signifies a Difference of Arms, as *gravis Armatura*, *levis Armatura*, the heavy and light-armed Troops: sometimes the Soldiers themselves, as *Armaturæ duplæres*, *Armaturæ simplæres*, B. II. 7; *Armaturæ velocissimæ*, III. 14: sometimes the Exercises exhibited in the Circus, II. 23. Lipsius divides the Roman Exercises into two Kinds, the *Palatia* and *Armatura*, the latter of which, he says, was properly the Exercise of missile Weapons; but I can find no Reason to concur with this Opinion, which may perhaps be ranked among the Number of his speculative Mistakes in military Matters. The French Translator seems to have been equally puzzled with this Term, and calls it our Author's magic Word, which he uses to signify whatever he pleases: he translates it *l'Escrime*, but as the Exercise generally understood by that Expression seems particularly described in the 11th Section, it is not easy to conceive why Vegetius should repeat it again in this Manner: and he has been so minute in every Exercise that can be thought of both for the heavy and light Troops, that it makes it still more difficult to guess his Meaning here. But the most common Acceptation of the Word seems to denote the fixed and established military Exercises of the Romans, in the Sense we use the Word Exercise, to signify the particular Mode of Discipline adopted and observed by any Nation.

that Soldiers, perfect therein, are of the most Service in Engagements: and they afford certain Proofs of the Importance and Effects of Discipline, in the Difference we see between those properly trained in this Branch of Exercise, and the other Troops. The old Romans were so sensible of its Utility, that they rewarded the Masters at Arms with a double Allowance of Provision; and the Soldiers who were backward in this Exercise, were punished by having their Allowance in Barley; nor was it given them, as usual, in Wheat, till they had, in Presence of

Nation. Thus Vegetius uses it, B. I, 4, and II, 14. Hirtius, in the Alexandrine War, speaking of a Legion brought by Deiotarus to Cæsar's Assistance, has this Expression: *Legionem autem, quam ex Genere Civium suorum Deiotarus Armatura Disciplinaque nostra constitutam habebat, Equitatumque omnem ad Bellum gerendum adducere jussit.* Ammianus Marcellinus, our Author's Contemporary, uses it often in this Sense; Book XVII, *Sarmatas, & Quados, Vicinitate, & Similitudine Armorum, Armaturaque concordēs.* B. XIV, *Per multiplicem Armaturæ Scientiam.* B. XXI, *Equitandi & jaculandi maximæque perite dirigendi Sagittas, Artiumque Armaturæ pedestris perquam scientissimus.* B. XXIII, *Militari Cursu ac Disciplina Præludis que continuis Rei castrensis & Armaturæ.* In this Author we also find *Armaturarum Tribunus*, and *Armaturarum Rector*, where I am inclined to believe the Word means the Soldiery in general. After all, if Vegetius means any particular Kind of Exercise, I confess myself at a Loss to find it out; and if he means the Exercises in general, he has expressed himself in a very strange Manner,

E

the

the Præfect, Tribunes, or other principal Officers of the Legion, showed sufficient Proofs of their Knowledge of every Part of their Duty. No State can either be happy or secure that is remiss and negligent in the Discipline of its Troops. For it is not Profusion of Riches or Excess of Luxury that can influence our Enemies to court or respect us: this can only be effected by the Terror of our Arms. It is an Observation of Cato, that Misconduct in the common Affairs of Life may be retrieved, but that it is quite otherwise in War, where Errors are fatal and without Remedy, and are followed by immediate Punishment. For the Consequence of engaging an Enemy, without Conduct or Courage, is, that Part of the Army is left on the Field of Battle, and those who remain, receive such an Impression from their Defeat, that they dare not afterwards look the Enemy in the Face.

XIV. To
be taught the
Use of mis-
sive Wea-
pons.

* Besides the abovementioned Exercise of the Recruits at the Post, they were furnished with Javelins of a greater Weight than common, which they were taught to throw at the same Post: and the Masters at Arms were very careful to instruct them how to cast them with a proper Aim

* In the Orig. this Section begins; Sed ad Inceptum re-
vertor.

and

and Force. This Practice strengthens the Arm, and makes the Soldier a good Marksman.

A third or fourth Part of the youngest and fittest Soldiers should also be exercised at the Post with Bows and Arrows made for that Purpose only. * The Masters for this Branch must be chosen with Care, and must apply themselves diligently to teach the Men to hold the Bow in a proper Position, to bend it with Strength, to keep the left Hand steady, to draw the right with Skill, to direct both the Attention and the Eye to the Object, and to take their Aim with equal Certainty either on Foot or on Horseback: but this is not to be acquired without great Application, or to be retained without daily Exercise and Practice. The Utility of good Archers in Action is evidently demonstrated by Cato in his Treatise on military Discipline. To the Institution of a Body of Troops of this Sort, Claudius † owed his Victory over an Enemy who, till that Time, had constantly been superior to him :

XV. To be instructed in the Use of the Bow.

* Bows and Arrows made for that Purpose.] Orig. *Ar- cubus ligneis, Sagittisque luforiis*; wooden Bows, &c. Bows were sometimes made of other Materials, as Iron, Reeds, Canes, &c.

† Claudius.] This was Appius Claudius the Consul, who retook Capua from Hannibal. See the Note, Book III, Sect. 16.

and Scipio Africanus *, before his Battle with the Numantines, who had made a Roman Army ignominiously pass under the Yoke, thought he could have no Likelihood of Success, but by mingling a Number of select Archers with every Century.

XVI. Of
the Sling.

Recruits are to be taught the Art of throwing Stones both with the Hand and Sling. The Inhabitants of the Balearian Islands † are said to have been the Inventors of Slings, and to have managed them with surprising Dexterity, owing to the Manner of bringing up their Children, who were not allowed their Food by their Mothers till they had first struck it with their Sling. Soldiers, notwithstanding their defensive Armor, are often more annoyed by the round Stones from the Sling, than by all the Arrows of the Enemy : they kill without mangling the Body, and the Contusion is mortal without Loss of Blood. It is universally known the Ancients employed Slingers in all their Engagements. There is the greater Reason for instructing all the Troops,

* Scipio Africanus.] Frontinus, the Author abovementioned, speaks of this Invention of Scipio in the following Passage : Strateg. Book IV, Cap. ult. Scipio Æmilianus ad Numantium, omnibus, non Cohortibus tantum, sed Centuriis, Sagittarios & Funditores interposuit.

† Balearian Islands.] Majorca, Minorca, and Yvica. Vegetius describes the Sling, Book III, Sect. 14.

without

without Exception, in this Exercife, as the Sling cannot be reckoned any Incumbrance, and often is of the greateft Service; especially when they are obliged to engage in ftony Places, to defend a Mountain or an Eminence, or to repulfe an Enemy at the Attack of a Castle or City.

The Exercife of the loaded Javelins, called Martiobarbuli *, must not be omitted. We had ^{xvii. of the loaded Javelin.} formerly two Legions in Illyricum, confifting of fix thousand Men each, which, from their extraordinary Dexterity and Skill in the Ufe of thefe Weapons, were diftinguifhed by the fame Appellation. They fupported, for a long Time, the Weight of all the Wars, and fignafied themfelves fo remarkably, that the Emperors Diocletian and Maximian, on their acceffion, honored them with the Titles of Jovian and Herculean, and preferred them before all the other Legions. Every Soldier carries five of thefe Javelins in the Concavity of his Shield: and thus the Legionary Soldiers feem to fupply the Place of Archers,

* Loaded Javelins, called Martiobarbuli.] Orig. Plumbarum, quas Martiobarbulos vocant. The Word Martiobarbuli, according to the Critics, fignifies Mars's Barbels, Martis Barbuli vel Barbi. Spartian, in the Life of Severus, Cap. XI. fpeaks of a Weapon of the fame Kind, called Plumbea; and Pliny mentions the Plumbatæ Sagittæ, 10. 23. The Martiobarbuli feem to have been loaded with Lead, and feathered.

for they wound both the Men and Horses of the Enemy even before they come within Reach of the common missive Weapons.

XVIII. Recruits to be taught to vault.

The Ancients strictly obliged both the Veteran Soldiers and Recruits to a constant Practice of Vaulting: it has indeed reached our Times, tho' little Regard is paid to it at present. They had wooden Horses for that Purpose placed in Winter under Cover, and in Summer in the Field; the young Soldiers were taught to vault on them, at first without Arms, afterwards completely armed; and such was their Attention to this Exercise, that they were accustomed to mount and dismount on either Side indifferently*, with their drawn Swords or Lances in their Hands. By assiduous Practice in the Leisure of Peace, their Cavalry was brought to such Perfection of Discipline, that they mounted their Horses in an Instant even amidst the Confusion of sudden and unexpected Alarms.

XIX. To be accustomed to carry Burdens.

To accustom Soldiers to carry Burdens is also an essential Part of Discipline. Recruits in particular should be obliged frequently to carry a

* On either Side indifferently.] It must be remembered the Romans had no Stirrups.

Weight,

Weight not less than sixty Pounds *, and to march with it in the Ranks : as on difficult Expeditions they often find themselves under the Necessity of carrying their Provisions as well as their Arms. Nor will they find this troublesome when inured to it by Custom, which makes every Thing easy. Our Troops in ancient Times were a Proof of this, and Virgil has remarked it in the following Lines.

“ The Roman Soldiers, bred in War’s alarms,
 “ Bending with unjust Loads and heavy Arms,
 “ Cheerful their toilsome Marches undergo,
 “ And pitch their sudden Camp before the
 Foe.” †

The Manner of arming the Troops comes next XX. Arms of the Ancients. under Consideration. But the Method of the Ancients no longer subsists : for tho’, after the Example of the Goths, the Alans, and the Huns, we have made some Improvements in the Arms of the Cavalry, yet it is plain the Infantry are

Sixty Pounds.] This Weight is to be understood exclusively of their Arms. The Roman Pound was somewhat less than ours.

† Georgic III. 346. The Translation is altered from Dryden.

entirely

entirely defenceless *. From the Foundation of the City till the Reign of the Emperor Gratian the Foot wore Cuirasses and Helmets. But Negligence and Sloth having by Degrees introduced a total Relaxation of Discipline, the Soldiers began to think their Armor too heavy, as they seldom put it on. They first requested Leave from the Emperor to lay aside the Cuirass, and afterwards the Helmet; in Consequence of which, our Troops, in their Engagements with the Goths, were often overwhelmed with their Showers of Arrows: nor was the Necessity of obliging the Infantry to resume their Cuirasses and Helmets discovered, notwithstanding such repeated Defeats, which brought on the Destruction of so many great Cities. Troops, defenceless and exposed to all the Weapons of the Enemy, are more disposed to fly than fight. What can be expected from a Foot-Archer, without Cuirass or Helmet, who cannot hold at

* The Infantry are entirely defenceless.] From this almost entire Neglect of Armor, so much complained of by our Author, a Point wherein the Fashion seems to have been as variable as that of Dress, succeeding Times fell into the contrary Extreme, witness the Story of Philip of France at the Battle of Bouvines in 1215: it is now as much neglected as ever; but as some modern Authors, of no inconsiderable Authority, seem to prophecy the Abolition of Fire-Arms hereafter in Favor of the ancient Weapons, it is reasonable to conclude that such an Alteration, whenever it happens, will bring Armor again into Use.

once

once his Bow and a Shield? or from the Ensigns whose Bodies are naked, and who cannot at the same Time carry a Shield and the Colors? The Foot-Soldier finds the Weight of a Cuirass and even of a Helmet intolerable; for this Reason, because he is seldom exercised, and seldom puts them on. But the Case would be quite different, were they even heavier than they are, if by constant Practice he had been accustomed to wear them. But it seems these very Men, who cannot support the Weight of the ancient Armor, think nothing of exposing themselves without Defence to Wounds and Death, or, which is worse, to the Shame of being made Prisoners *, or of betraying their Country by Flight; and thus, to avoid an inconsiderable Share of Exercise and Fatigue, suffer themselves ignominiously to be cut in Pieces. With what Propriety could

* Made Prisoners.] There was not, among the Romans, a greater military Crime than for a Soldier to surrender himself Prisoner with his Arms in his Hand. We have a remarkable Instance of this in Eutropius, Book II. *Romani jufferunt Captivos omnes, quos Pyrrhus reddiderat, infames haberi, qui se Armis defendere potuissent.* And Frontinus, *Strateg.* IV, 1, mentioning the same Affair, is more particular in the Description of their Punishment: *Appii Claudii Sententia, Senatus eos, qui a Pyrrho Epirotarum Rege capti, & postea remissi erant, Equites ad Peditem redegit, Pedites ad levem Armaturam, omnibus extra Vallum jussis tendere, donec binæ Hostium Spolia singuli referrent.*

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the

the Ancients call the Infantry a Wall *, but that in some Measure they resembled it by the complete Armor of the Legionary Soldiers, who had Shields, Helmets, Cuirasses, and Greaves of Iron on the right Leg: and the Archers had Gantlets on the left Arm. These were the defensive Arms of the Legionary Soldiers: those who fought in the first Line of their respective Legions, were called Principes, in the second Hastati, and in the third Triarii †. The Triarii, according to their Method of Discipline, rested in Time of Action on one Knee, under Cover of their Shields, that in this Position they might be less exposed to the Darts of the Enemy than if they stood upright; and that, when there was a Necessity for bringing them up, they might be fresh, in full Vigor, and charge with the greater Impetuosity: and there have been many Instances of their gaining a complete Victory ‡, after the

* A Wall.] We meet with this Expression in Lucan, VIII, 378.

———— Parthoque sequente
Murus erit, quodcunque potest obistere Sagittæ.

† Triarii.] When these Troops engaged, Matters were looked on as almost desperate: whence the Proverb, Res ad Triarios rediit, to signify Things were come to the last Push.

‡ Many Instances of their gaining a complete Victory.] This Method of relieving the Lines, which seems calculated

the entire Defeat of both the Principes and Hastati. The Ancients had likewise a Body of light Infantry, Slingers, and Ferentarii*, who were generally posted on the Wings and began the Engagement: the most active and best disciplined Men were selected for this Service; and, as their Number was not very great, they easily retired, in Case of a Repulse, thro' the Intervals of the Legions, without occasioning the least disorder in the Line. The Pannonian leathern Caps, worn by our Soldiers at present on Service, were formerly introduced with a different Design; for the Ancients obliged the Men to wear them at all Times, that being constantly accustomed to have the Head covered, they might be less sensible of the Weight of a Helmet. As to the missile Weapons of the Infantry, they were Javelins headed with a triangular sharp Iron, eleven Inches or a Foot long, and were called Piles:

lated almost to ensure Success, and wherein the great Secret of Roman Discipline consisted, is entirely unknown to us. In *Livy's* Description of the Battle between the Romans and Latins, where Decius devoted himself for his Country, it is thus described: *Ubi Triarii confurrexerant integri, refulgentibus Armis, nova ex improvise exorta Acies, receptis in Intervals Ordinum Antepilanis, clamore subdito, Principia Latinorum perturbant; L. VII, 16.*

* *Ferentarii.*] These were the light Troops, so called, according to *Festus*, a *ferendo Auxilio*.

when once fixed in the Shield it was impossible to draw them out, and when thrown with Force and Skill, they penetrated the Cuirass without Difficulty. At present they are seldom used by us, but are the principal Weapon of the Barbarian heavy-armed Foot; they are called *Bebræ*, and every Man carries two or three of them to Battle. It must be observed, that when the Soldiers engage with the Javelin, the left Foot should be advanced, by which Attitude the Force required to throw it is considerably encreased. on the contrary, when they are close enough to use their Pikes and Swords, the right Foot should be advanced, that the Body may present less Aim to the Enemy, and the right Arm be nearer, and in a more advantageous Position for striking. Hence it appears, that it is as necessary to provide Soldiers with defensive Arms of every Kind, as to instruct them in the use of offensive ones: for it is certain a Man will fight with greater Courage and Confidence, when he finds himself properly armed for Defence.

XXI. In-
trenched
Camps.

Recruits are to be instructed in the Manner of intrenching Camps, there being no Part of Discipline so necessary and useful as this: for in a Camp, well chosen and intrenched, the Troops both Day and Night lie secure within their Works, tho' in View of the Enemy: it seems to resemble a fortified City which they can build for
their

their Safety wherever they please. But this valuable Art is now entirely lost: for it is long since any of our Camps have been fortified either with Trenches or Palisades. By this Neglect our Forces have been often surpris'd by Day and Night by the Enemy's Cavalry, and suffered very severe Losses. The Importance of this Custom appears not only from the Danger to which Troops are perpetually expos'd who encamp without such Precautions, but from the distressful Situation of an Army that, after receiving a Check in the Field, finds itself without Retreat, and consequently at the Mercy of the Enemy * who seldom put an End to the Carnage till weary of Slaughter.

A Camp, especially in the Neighborhood of an Enemy, must be chosen with great Care: its Situation should be strong by Nature, and there should be Plenty of Wood, Forage and Water. If the Army is to continue in it any considerable Time, Attention must be had to the Salubrity of the Place. The Camp must not be commanded by any higher Grounds from whence it might be insulted or annoyed by the Enemy:

* At the Mercy of the Enemy.] Orig. *More Animantium multi (vel inulti) cadunt.* I have taken some Liberty here with the Original.

nor must the Situation be liable to Inundations *, which would expose the Army to great Danger. The Dimensions of the Camp must be determined by the Number of Troops and the Quantity of Baggage, that a large Army may have Room enough, and that a small one may not be obliged to extend itself beyond its proper Ground.

XXIII. *Its Form.* The Form of the Camps must be determined by the Site of the Country, in Conformity to which they must be square, triangular, or oval. The Prætorian Gate should either front the East or the Enemy: in a temporary Camp † it should face the Route by which the Army is to march. Within this Gate the Tents of the first Centuries or Cohorts are pitched, and the Dragons ‡ and other Ensigns planted. The Decurmanē

* Inundations.] There is an Instance of this in Cæsar, whose Army was in the greatest Danger from a sudden Inundation near Herda. Bell. civil. l. 40.

† Temporary Camp.] Orig. Si Iter agitur. The Romans called these *Temporaria Castra*, in Opposition to the *Stadera*.

‡ Dragons.] The Dragon was the particular Ensign of each Cohort. Ammianus gives us the following elegant Description of it, in his Account of the triumphal Entry of Constantius into Rome: *Alios purpureis Subtegminibus terti circumdedere Dracones, Hastarum aureis gemmatif- que Summitatibus illigati, Hiatu vasto perflantes, & ideo velut*

mane Gate is directly opposite to the Prætorian in the Rear of the Camp, and thro' this the Soldiers are conducted to the Place appointed for Punishment or Execution.

There are two Methods * of intrenching a Camp. When the Danger is not imminent, XXIV. Its Intrenchments. they carry a slight Ditch round the whole Circuit, only nine Feet broad and seven deep; and with the Turf taken from thence make a Kind of Wall or Breastwork three Feet high within the Ditch. But when there is Reason to be apprehensive of Attempts of the Enemy, the Camp must be surrounded with a regular Ditch twelve Feet broad and nine deep perpendicular from the Surface of the Ground. A Parapet is then raised on the Side next the Camp, of the Height of four Feet, with Hurdles and Fascines properly covered and secured by the Earth taken out of the Ditch. From these Dimensions the interior

velut Ira percisi sibilantes, Candarumque Volumina restituentes in Ventum, Lib. 16.

* Two Methods.] Orig. *Diversa triplexque Munitione est.* Vegetius gives us but two Methods of intrenching: but if this is the true Reading, he reckons the Method of covering the Troupe at Work on the Intrenchments, in Case of Apprehensions from the Enemy, as the third. But this must be an Oversight, as there is no Difference in the Manner of carrying on the Works, but only in the Difficulty and Danger attending them. (French Translator.)

Height

Height of the Intrenchment will be found to be thirteen Feet, and the Breadth of the Ditch twelve. On the Top of the whole are planted strong Palisades which the Soldiers carry constantly with them for that Purpose. A sufficient Number of Spades, Pickaxes, Wicker-Baskets, and Tools of all Kinds, are to be provided for these Works.

XXV. Method of intrenching in Presence of the Enemy.

There is no Difficulty in carrying on the Fortifications of a Camp when no Enemy is in Sight; but if the Enemy is near, all the Cavalry and Half the Infantry are to be drawn up in Order of Battle, to cover the rest of the Troops at Work on the Intrenchments, and be ready to receive the Enemy if they offer to attack them. The Centuries are employed by turns on the Work, and are regularly called to the Relief by a Crier * till the whole is completed: it is then inspected and measured by the Centurions, who punish such as have been indolent or negligent. This is a very important Point in the Discipline of young Soldiers, who,

* A Crier.] Orig. *Per Præconem*. Ælian informs us that each Maniple had an Officer of this Sort. Clearchus, who commanded the Greeks in Cyrus's Expedition, had with him Tolmides of Elis, the best Crier of his Time: Xenophon; Cyri Exp. B. II. And Hannibal, when he stormed the Roman Camp at Capua, caused their Criers to be counterfeited.

when

when properly trained to it, will be able, on an Emergency, to fortify their Camp with Skill and Expedition, and without Confusion.

No Part of Discipline is more essential in XXVI. Evolutions. Action than for Soldiers to keep their Ranks with the greatest Exactness, without opening or closing too much. Troops too much crouded can never fight as they ought, and only embarrass one another: if their Order is too open and loose, they give the Enemy an Opportunity of penetrating; whenever this happens, and they are attacked in the Rear, universal Disorder and Confusion are inevitable. Recruits should therefore be constantly in the Field, drawn up by the Roll, and formed at first into a single Rank; they should learn to dress in a strait Line, and to keep an equal and just Distance between Man and Man. They must then be ordered to double the Rank, which they must perform very quick, and cover instantly their File Leaders. In the next Place, they are to double again and form four deep; and then the Triangle, or, as it is commonly called, the Wedge, a Disposition found very serviceable in Action. They must be taught to form the Circle or Orb, for well-disciplined Troops, after being broke by the Enemy, have thrown themselves into this Position, and thereby prevented the total Rout of the Army. These Evolutions, often practised

in the Field of Exercise, will be found easy in Execution on actual Service.

XXVII.
Monthly
Marches.

It was a constant Custom among the old Romans, confirmed by the Ordinances of Augustus and Adrian, to exercise both Cavalry and Infantry, three Times in the Month, by Marches of a certain Length; for which Kind of Exercise there is a particular Term*. The Foot were obliged to march, completely armed, the distance of ten Miles from the Camp, and return, in the most exact Order and with the military Step, which they changed and quickened on some Part of the March. The Cavalry likewise, in Troops and properly armed, performed the same Marches, and were exercised at the same Time in their peculiar Movements and Evolutions; sometimes, as it were, pursuing an Enemy, sometimes retreating, and returning again with greater Impetuosity to the Charge. They made these Marches not in plain and even Ground only, but both Cavalry and Infantry were ordered into difficult and uneven Places, and to ascend or descend Mountains, to prepare them for all

* Particular Term.] This Term is *Ambulare*: it seems to have been also the general Term for marching in the Ranks. Thus, in the 9th Sect. we find, *Ut ambulare celeriter & æqualiter discant*, to march quick and together: and in the 23d Sect. of the following Book, *Gradu pleno ambulare*, to march in the full Step.

Kinds

Kinds of Accidents, and familiarise them with the different Manœuvres that the various Situation of a Country may require.

* These military Maxims and Instructions, XXVIII.
Concise. invincible Emperor, as a Proof of my Devotion and Zeal for your Service, i have carefully collected from the Works of all the ancient Authors on the Subject. My Design herein is to point out the certain Method of forming good and serviceable Armies, which can only be compassed by an exact Imitation of the Ancients in their Care in the Choice and Discipline of their Levies. Men are not degenerated in Point of Courage; nor are the Countries that produced the Lacedæmonians, the Athenians, the Mar- sians, the Samnites, the Peligni, and even the Romans themselves, yet exhausted. Did not the Epirots acquire, in former Times, a great Reputation in War? Did not the Macedonians and Thessalians, after conquering the Persians, penetrate even into India? And it is well known that the warlike Dispositions of the Dacians, Mœsians, and Thracians, gave Rise to the Fable that Mars was born among them.

* I have ventured on some Alteration of the Beginning of this Section, the Sense in the Original being rather confused.

To pretend to enumerate the different Nations so formidable of old, all which are now subject to the Romans, would be tedious. But the Security established by long Peace has altered their Dispositions, drawn them off from military to civil Pursuits, and infused into them, a Love of Idleness and Ease. Hence a Relaxation of military Discipline insensibly ensued, then a Neglect of it, and it sunk at last into entire Oblivion. Nor will it appear surprising that this Alteration should have happened in latter Times, if we consider that the Peace, which lasted about twenty Years or somewhat more, after the first Punic War, enervated the Romans, before every where victorious, by Idleness and Neglect of Discipline to such a degree, that in the second Punic War they were not able to keep the Field against Hannibal. At last, after the Defeat of many Consuls, and the Loss of many Officers and Armies, they were convinced that the Revival of Discipline was the only Road to Victory, and thereby recovered their Superiority. The Necessity, therefore, of Discipline cannot be too often inculcated, and the strict Attention requisite in the Choice and Exercise of new Levies. It is also certain, that it is a much less Expence to a State to train its own Subjects to Arms, than to take Foreigners into its Pay.

END OF BOOK I.

MILITARY INSTITUTIONS

O F

V E G E T I U S.

B O O K I I.

T O T H E

EMPEROR VALENTINIAN.

P R E F A C E.

SUCH a continued Series of Victories and Triumphs proves incontestibly Your Majesty's full and perfect Knowledge of the military Discipline of the Ancients; Success in any Profession is the most certain Mark of Skill in it. By a Greatness of Mind above human Comprehension Your Majesty condescends to seek Instruction from the Ancients, notwithstanding Your own recent Exploits surpass Antiquity itself. On receiving Your Majesty's Orders to
continue

continue this Abridgement, not so much for Your Instruction as Convenience, I knew not how to reconcile my Devotion to Your Commands with the Respect due to Your Majesty. Would it not be the greatest Height of Presumption to pretend to mention the Art of War to the Lord and Master of the World, and the Conqueror of all the barbarous Nations, unless it were to describe his own Actions? But Disobedience to the Will of so great a Prince would be both highly criminal and dangerous. My Obedience, therefore, made me presumptuous, from the Apprehensions of appearing more so by a contrary Conduct: and in this I was not a little encouraged by the late Instance of Your Majesty's Indulgence. My Treatise 'on the Choice and Discipline of new Levies met with a favourable Reception from Your Majesty, and since a Work succeeded so well composed of my own Accord, I can have no Feárs for one undertaken by Your own express Commands.

B O O K II.

SECTION. I. The military Establishment. II. Difference of the Legions and Auxiliaries. III. Causes of the Decay of the Legions. IV. Number of Legions the Ancients brought into the Field. V. Manner of embodying the Legion. VI. Number of Cohorts in a Legion, and of Soldiers in a Cohort. VII. Names and Ranks of the Officers of the Legion. VIII. Names of the Officers who commanded the ancient Orders or Divisions of the Legion. IX. Præfect of the Legion. X. Præfect of the Camp. XI. Præfect of the Workmen. XII. Tribune of the Soldiers. XIII. Centuries and Ensigns of the Foot. XIV. Legionary Troops of Horse. XV. Manner of drawing up a Legion in Order of Battle. XVI. Arms of the Centurions and Triarii. XVII. The heavy-armed Troops immoveable in Action. XVIII. Names and Ranks of the Soldiers inscribed on their Shields. XIX. Writing and Accounts requisite in Recruits. XX. Custom of depositing Half of the Donatives at the Colors. XXI. Promotions in the Legion. XXII. The Trumpet; Cornet, and Buccina. XXIII. Exercises of the Troops. XXIV. War compared with other Professions. XXV. Machines and Tools of the Legion.

* THE military Establishment consists of SECT. I.
The military Establishment. three Parts, the Cavalry, Infantry, and Marine. The Wings of Cavalry were

* This Section begins thus in the Original: *Res igitur militaris (sicut Latinorum egregius Auctor Carminis sui testatur*

so called from their Similitude to Wings in their Extension on both Sides of the main Body for its Protection: they are now called Vexillations from the Kind of Standards peculiar to them *. The Legionary Horse are Bodies particularly annexed to each Legion, and of a different Kind; and on their Model were established the Cavalry called Ocreati from the light Boots they wear. The Fleet consists of two Divisions, the one of Men of War called Liburnæ †, and the other of armed Sloops. The Cavalry are designed for Plains; Fleets are employed for the Protection of Seas and Rivers; the Infantry are proper for the Defence of Eminences, for the Garrisons of Cities, and are equally serviceable in plain and in uneven Ground. The latter, therefore, from their Facility of acting every where, are certainly the most useful and necessary Troops to a State, exclusively of the Consideration of their being

testatur Exordio) Armis constat & Viris. Hæc in tres dividitur Partes, Equites, &c. Vegetius here alludes to the first Verse of Virgil's *Æneid*, *Arma Virumque cano*; but the Allusion is so dry and insipid, that I have followed the French Translator in omitting it.

* Standards peculiar to them.] Orig. Vexillationes vocantur, a Velo, quia Velis, hoc est, Flammulis utuntur.

† Liburnæ.] For the Description of these Ships, see Book V, Sect. 3, 4, 7. The others are called Naves Lusoriae, armed Sloops, in Opposition to the Men of War.

maintained

maintained at a less Expence *. The Infantry are divided into two Corps, the Legions and Auxiliaries, the latter of which are furnished by the Allies or Confederates. The peculiar Strength of the Romans always consisted in the excellent Establishment of their Legions; which were so denominated *ab eligendo*, from the Care and Exactness employed in the Choice of the Soldiers. The Number of Legionary Troops in an Army is generally much more considerable than that of the Auxiliaries,

The Macedonians, the Greeks, and the Dardanians, formed their Troops into Phalanxes of eight thousand Men each. The Gauls, Celtiberians, and many other barbarous Nations, divided their Armies into Bodies of six thousand each. The Romans have their Legions, usually six thousand strong, sometimes more. We shall now explain the Difference between the Legions and the Auxiliaries: the latter are hired Corps of Foreigners, assembled from different Parts of the Empire, made up of different Numbers, without Knowledge of one another, or any Tie

H. Difference of the Legions and Auxiliaries.

* *Less Expence.*] Here follows in the Text the Etymology of the Word *Exercitus*: *Exercitus ex Re ipsa atque Opere Exercitii Nomen accepit, ut ei nunquam liceret oblivisci, quod vocabatur.* As this Definition does not answer in English, and causes a disagreeable Interruption in the Section, I have omitted it.

of Affection; each Nation having its own peculiar Discipline, Customs, and Manner of fighting. Little can be expected from Forces so dissimilar * in every Respect, since it is one of the most essential Points in military Undertakings that the whole Army should be put in Motion and governed by one and the same Order: but it is almost impossible for them to act in Concert under such varying and unsettled Circumstances. They are, however, when properly trained and disciplined, of material Service, and are always joined, as light Troops, with the Legions in the Line; and tho' they do not place their principal Dependence on them, yet they look on them as a very considerable Addition to their Strength. But the complete Roman Legion, in its own peculiar Cohorts, contains within itself the heavy-armed Foot, that is, the Principes, Hastati, Triarii, and Antesignani; the light-armed Foot, consisting of the Ferentarii, Archers, Slingers, and Balistarii; together with the Legionary Cavalry incorporated with it; these Bodies, all actuated with the same Spirit, are united inseparably in their various Dispositions for forming, encamping, and fighting: thus it is compact and perfect in all its Parts, and, without any foreign Assistance, has always been superior to any Force

* Dissimilar in every Respect.] I have taken the Liberty to alter a little the Turn of these Sentences.

that could be brought against it. The Roman Greatness is a Proof of the Excellence of their Legions, with which they always defeated whatever Numbers of the Enemy they thought fit, or their Circumstances gave them an Opportunity, to engage.

The Name of the Legion remains indeed to this Day in our Armies, but its Strength and Substance are gone, since, by the Neglect of our Predecessors, Honors and Preferments were to be attained only by Interest and Favor, which were formerly the Recompences of Merit and long Services. Care is no longer taken to replace the Soldiers, who after serving their full Time, have received their Discharges*. The

III. Causes
of the De-
cay of the
Legions.

* Discharges.] The Time of Service often varied among the Romans: it was sometimes fixed at twenty or thirty Years, and sometimes more. I cannot forbear inserting here the Manner of cashiering an Officer, from Hirtius's Commentary of Cæsar's Wars in Africa, C. 54. Cæsar postero Die de Suggestu, convocatis omnium Legionum Tribunis Centurionibusque, &c. C. Aviene, quod in Italia Milites Populi Romani contra Rempublicam instigasti; Rapinasque per Municipia fecisti; quodque mihi Reique publicæ inutilis fuisti; et pro Militibus tuam Familiam Jumentaue in Naves imposuisti; tuaque Opera Militibus Tempore necessario Respublica caret: ob eas Res, Ignominie Causa, ab Exercitu meo te removeo, hodieque ex Africa abesse, & quantum potest, proficisci jubeo. Itemque te, A. Fonteï, quod Tribunus Militum seditionosus, malusque Civis fuisti, ab Exercitu dimitto, &c.

Vacancies continually happening by Sickneſs, Discharges, Deſertion, and various other Casualties, if not ſupplied every Year, or even every Month, muſt in Time diſable the moſt numerous Army. Another Cauſe of the Weakneſs of our Legions is, that in them the Soldiers find the Duty hard, the Arms heavy, the Rewards diſtant, and the Diſcipline ſevere; to avoid which Inconveniencies, the young Men inliſt in the Auxiliaries, where the Service is leſs laborious, and they have Reaſon to expect more ſpeedy Re- compences. Cato the Elder, who was often Conſul, and always victorious at the Head of Armies, believed he ſhould do his Country more eſſential Service by writing on military Affairs, than by all his Exploits in the Field. For the Conſequences of brave Actions are only temporary, while whatever is committed to writing for public Good is of laſting Utility. Several others have followed his Example, particularly Frontinus, whoſe elaborate Works on this Subject were ſo well received by the Emperor Trajan. Theſe are the Authors whoſe Maxims and Inſtitutions I have undertaken to abridge in the moſt faithful and concise Manner. The Expence of keeping up good or bad Troops is the ſame; but it depends wholly on You, moſt Auguſt Emperor, to recover the excellent Diſcipline of the Ancients, and to correct the Abuſes of latter Times; a Reformation, the Advanta-
ges

ges of which will be equally felt by ourselves and our Posterity.

All our Writers agree that never more than two Legions, besides Auxiliaries, were sent under the Command of each Consul, against the most numerous Armies of the Enemies. Such was the Dependence on their Discipline and Resolution, that this Number was thought sufficient for any War they were engaged in. I shall therefore explain the Establishment of the ancient Legion, according to the military Constitution: but if the Description should appear obscure or imperfect, it is not to be imputed to me, but to the Difficulty of the Subject itself, which is therefore to be examined with the greater Attention. A Prince, skilled himself in military Affairs, has it in his Power to make himself invincible, by keeping up whatever Number of well-disciplined Forces he thinks proper.

The Recruits having been thus carefully chosen, with proper Attention to their Persons and Dispositions, and having been daily exercised for the Space of four Months at least, the Legion is formed by the Command and under the Auspices of the Emperor. The military Mark, which is indelible, * is first imprinted on the Hands of the new Levies, and as their Names

IV. Number of Legions the Ancients brought into the Field,

V. Manner of embodying the Legion.

* Indelible.] Orig. victuris in Cute Punctis.

are inserted in the Roll of the Legion, they take the usual Oath, from thence called the military Oath. They swear by God, by Christ, and by the Holy Ghost; and by the Majesty of the Emperor, who, after God, should be the chief Object of the Love and Veneration of Mankind. For when he has once received the Title of August, his Subjects are bound to pay him the most sincere Devotion and Homage, as the Representative of God on Earth: and every Man, whether in a private or military Station, serves God in serving him faithfully who reigns by his Authority. The Soldiers, therefore, swear they will obey the Emperor willingly and implicitly in all his Commands, that they will never desert, and that they will always be ready to sacrifice their Lives for the Roman Empire.

VI. Number of Cohorts in a Legion, and of Soldiers in a Cohort.

The Legion should consist of ten Cohorts, the first of which exceeds the others both in the Number and Quality of its Soldiers, who are selected to serve in it as Men of some Family and Education. This Cohort has the Care of the Eagle, the chief Ensign in the Roman Armies, and the Standard of the whole Legion; and of the Images of the Emperors, which are always considered as sacred*. It consists of eleven hundred and five Foot and one hundred and thirty

* Considered as sacred.] Orig. *divina & præsentia Signa veneratur.*

two Horse Cuirassiers, and is distinguished by the Name of the *Milliarian Cohort**, It is the Head of the Legion, and is always first formed on the Right of the first Line when the Legion draws up in Order of Battle. The second Cohort contains five hundred and fifty five Foot and sixty six Horse, and is called the *Quingentarian Cohort*. The third is composed of five hundred and fifty five Foot and sixty six Horse, generally chosen Men, on Account of its Situation in the Center of the first Line. The fourth consists of the same Number of five hundred and fifty five Foot and sixty six Horse. The fifth has likewise five hundred and fifty five Foot and sixty six Horse, which should be some of the best Men, being posted on the left Flank, as the first Cohort is on the right. These five Cohorts compose the first Line. The sixth includes five hundred and fifty five Foot and sixty six Horse, which should be the Flower of the young Soldiers, as it draws up in the Rear of the Eagle and the Images of the Emperors, and on the Right of the second Line. The seventh contains five hundred and fifty five Foot and sixty six Horse. The eighth is composed of five hundred

* *Milliarian Cohort.*] Orig. *Cohors milliaria*. The French Translator interprets it *Cohorte militaire*, which must certainly be a Mistake; the first Cohort receiving this Appellation from the Number of Soldiers it contained, as the others were called *Quingentariae* for the same Reason.

and fifty five Foot and sixty six Horſe, all ſelect Troops, as it occupies the Center of the ſecond Line. The ninth has five hundred and fifty five Foot and sixty ſix Horſe. The tenth conſiſts of the ſame Number of five hundred and fifty five Foot and ſixty ſix Horſe, and requires good Men, as it cloſes the left Flank of the ſecond Line. Theſe ten Cohorts form the complete Legion, conſiſting in the whole of ſix thouſand one hundred Foot, and ſeven hundred and twenty ſix Horſe. A Legion ſhould never be compoſed of a leſs Number of Men, but it is ſometimes ſtronger, by the Addition of other Milliarian Cohorts.

VII. Names
and Ranks
of the Offi-
cers of the
Legion.

Having ſhown the ancient Eſtabliſhment of the Legion, we ſhall now explain the Names of the principal Soldiers, or, to uſe the proper Term, the Officers, and their Ranks according to the preſent Rolls of the Legions. The firſt Tribune is appointed by the expreſs Commiſſion and Choice of the Emperor: the ſecond Tribune riſes to that Rank by Length of Service. The Tribunes are ſo called from their Command over the Soldiers, who were at firſt levied by Romulus out of the different Tribes. The Officers who in Action command the Orders or Diviſions are called Ordinarii: the Auguſtales were added by Auguſtus to the Ordinarii; and the Flaviales were appointed by Flavius Veſpaſian

fron to double the Number of the Auguftales. The Eagle-Bearers and the Image-Bearers are thofe who carry the Eagles and Images of the Emperors. The Optiones are fubaltern Officers, fo denominated from their being felected by the Option of their fuperior Officers, to do their Duty as their Subftitutes or Lieutenants, in Café of Sicknefs or other Accident. The Ensign-Bearers carry the Ensigns, and are now called Draconarii. The Tefſerarii* deliver the Parole and the Orders of the General to the different Meſſes of the Soldiers. The Campigeni or Antefignani† are thofe whoſe Duty it is to keep up the proper Exercifes and Discipline among the Troops. The Metatores are ordered before the

* Tefſerarii.] Vegetius here defines the Tefſera. The whole Paſſage ſtands thus: Tefſerarii, qui Tefſeram per Contubernia Militum nunciant. Tefſera autem dicitur Præceptum Ducis, quo vel ad (aliquod) Opus, vel ad Bellum movetur Exercitus. The Tefſera was the Parole and Order: at firſt it was inſcribed on a Sort of Tally, the literal Meaning of the Word, and delivered from one Officer to another throughout the whole Army, till it was returned to the Commander in Chief, Præfect, or Tribune, who gave it out; but in our Author's Time, and long before, it was delivered by Word of Mouth. The different Kinds of Tefſeræ are particularly deſcribed in the 24th Chapter of Aeneas's Treatiſe on the Defence of Places.

† Campigeni or Antefignani.] Orig. Campigeni, hoc eſt, Antefignani, ideo ſic nominati, quia eorum Opera atque Virtute Exercitiū Genus creſcit in Campo.

Army to fix on the Ground for its Encampment. The Beneficarii are so named from their owing their Promotion to the Benefit or Interest of the Tribunes. The Librarii keep the Legionary Accounts. The Tubicines, Cornicines, and Buccinatores, derive their Appellations from blowing the Trumpet, Cornet, and Buccina.* Those who, expert in their Exercises, receive a double Allowance of Provisions, are called Armaturæ duplares, and those who have but a single Portion, simplares. The Mensores mark out the Ground by Measure for the Tents in an Encampment, and assign the Troops their respective Quarters in Garrisons. The Torquati, so denominated from the gold Collars given them in Reward of their Bravery, had, besides this Honor, different Allowances: those who received double were called Torquati duplares, and those who had only single simplares. There were, for the same Reason, Candidati† duplares, and Candidati simplares. These are the principal Soldiers or Officers, distinguished by their Rank and the Privileges thereto annexed. The

* Trumpet, Cornet, & Buccina.] See the Description of all these Instruments, Book III, Sect. 5.

† Candidati.] These were Volunteers who served in the Army in Expectation of Preferment: they borrowed the Name of Candidati from the Toga candida, the Dress in which all Candidates for Offices were obliged to appear. They answer to our Cadets.

rest

rest are called Munifices or working Soldiers, from their being obliged to every Kind of military Work without Exception.*

Formerly it was the Rule that the first Princeps of the Legion should be promoted regularly to the Rank of Centurion of the Primiple; he not only was intrusted with the Eagle, but commanded four Centuries, that is, four hundred Men, in the first Line; and, as the Head of the whole Legion, had Appointments of great Honor and Profit. The first Hastatus had the Command of two Centuries or two hundred Men in the second Line, and is now called Ducenarius. The Princeps of the first Cohort commanded a Century and a Half, that is, one hundred and fifty Men, and kept in a great Measure the general Detail of the Legion. The second Hastatus had likewise a Century and a Half or one hundred and fifty Men. The first Triarius had the Command of one hundred Men: thus the ten Centuries of the first Cohort were commanded by five Ordinarii, who by the antient Establishment enjoyed great Honors and Emoluments, that were annexed to this Rank in Order to inspire the Soldiers of the Legion with Emulation to attain such ample and considerable

VIII. Names of the Officers who commanded the ancient Orders or Divisions of the Legion.

* Every Kind of military Work.] Orig. Quia Munia facere coguntur.

Rewards. They had also Centurions appointed to each Century, now called Centenarii; and Decani, who commanded ten Men, now called Heads of the Messes. The second Cohort had five Centurions; and all the rest to the tenth inclusively the same Number: and in the whole Legion there were fifty five.

IX. Præfect of the Legion.

Lieutenants of Consular Dignity were formerly sent to command in the Armies under the General, and their Authority extended over both the Legions and Auxiliaries in Peace and War. Instead of these Officers, Persons of high Rank are now substituted with the Title of Masters of the Forces†: they are not limited to the Command of two Legions only, but have often a greater Number. But the peculiar Officer of the Legion was the Præfect, who was always a Count of the first Order: on him the chief Command devolved in the Absence of the Lieutenant. The Tribunes, Centurions, and all the Soldiers in general were under his Orders. He gave out the Parole and Order for the March and for the Guards: and if a Soldier committed a Crime, by his Authority the Tribune adjudged

† Masters of the Forces.] Orig. Magistros Militum. We have a similar Expression still in Use, Master of the Ordnance; and it is not long since that of Grand Master of the Artillery was in being.

him

him to Punishment. He had the Charge of the Arms, Horses, Clothing, and Provisions. It was also his Duty to keep both the Legionary Horse and Foot in daily Exercise, and to maintain the strictest Discipline. He ought to be a careful and diligent Officer, as the sole Charge of forming the Legion to Regularity and Obedience depended on him; and as the Excellence of the Soldiers redounded entirely to his own Honor and Credit.

The Præfect of the Camp, tho' of inferior X. Præfect of the Camp. Rank to the former, had a Post of no small Importance. The Position of the Camp, the Direction of the Intrenchments, the Inspection of the Tents or Huts of the Soldiers, and the Baggage, were comprehended in his Province. His Authority extended over the sick, and the Physicians who had the Care of them; and he regulated the Expences relative thereto. He had the Charge of providing Carriages, Bat-Horses, and the proper Tools for sawing and cutting Wood, digging Trenches, raising Parapets, sinking Wells, and bringing Water into the Camp. He likewise had the Care of furnishing the Troops with Wood and Straw; and the Rams, Onagri, Balistæ *, and all the other Engines

* Rams, Onagri, Balistæ.] The first of these Engines is well known; but the two others, notwithstanding the many

Engines of War, were under his Directions. This Post was always conferred on an Officer of
great

many Attempts to explain the Descriptions the Ancients have left us, are still unintelligible. Vegetius mentions them in several Places, but so slightly, that nothing can be collected from him. See Book II, 25; and Book IV, 9, 22. See Vitruvius, B. X, and Ammianus Marcellinus, B. XXIII. It is remarkable Vegetius takes no Notice of the Catapulta; though some imagine he speaks of it under the Name of Balista, and others under that of Onager. The Use of these Engines is also variously described. Vitruvius tells us the Catapultæ and Scorpions threw Darts; but the Balistæ Stones. Vegetius says the Balista shot Darts, the Onager Stones, and the Scorpion, which he calls also Manubalista, Darts of a very small and slender Make. Cæsar seems to mean that the Catapultæ were appropriated to throwing Stones. Ammianus, a sensible Historian and a good Soldier, who was Cotemporary with our Author, says the Scorpions were used for Stones, and the Balistæ for Darts; and in another Place, that the Onager and Scorpion were the same: and Iudorus, that the Balistæ threw both Stones and Darts. This Contrariety of Sentiments among the Ancients themselves makes it less surprising that the Moderns are unable to understand the Form and Powers of these Engines. We find the Ram used with Success long since the Invention of Cannon. When Francis I. of France besieged Pavia, and lay encamped for that Purpose in the Park, Davalo, Marquis of Pescara, who commanded the Imperial Army, after endeavoring in vain to draw him out to fight, beat down the Park Wall, which was remarkably strong, in the Night with three Rams: he chose this Method for Fear of alarming the French if he attempted it with Cannon; the Strokes of the Rams, however, were heard, but not suspected

great Skill, Experience, and long Service, and who consequently was capable of instructing others in those Branches of the Profession in which he had distinguished himself.

The Legion had a Train of Joiners, Masons, ^{XI. Prefect of the Workmen.} Carpenters, Smiths, Painters, and Workmen of every Kind, for the Construction of Barracks in the Winter-Camps, and for making or repairing the wooden Towers, Arms, Carriages, and the various Sorts of Machines and Engines for the Attack or Defence of Places. They had also travelling Work-shops, wherein they made Shields, Cuirasses, Helmets, Bows, Arrows, Javelins, and offensive and defensive Arms of all Kinds. The Ancients made it their chief Care to have every Thing for the Service of the Army within the Camp: they had even a Body of Miners, who, by working under Ground and piercing the Foundations of Walls, according to the Practice of the Bessi *, penetrated into the

pested. This opened a Passage for some Detachments of Horse and Foot, who posted themselves in such a Manner in the Park, that Francis was forced to fight, was defeated, and taken Prisoner.

* Bessi.] The Bessi were a People of Thrace. Vegetius speaks of them again, B. IV. 24, as very dextrous in working Mines of Metal: and they are mentioned by Ovid, Trist. IV, 1, 67.

“ Vivere quam miserum est inter Bessosque Getasque!”

Body

Body of a Place. All these were under the Direction of the Officer called the Præfect of the Workmen.

XII. Tribune of the Soldiers.

We have observed that the Legion had ten Cohorts, the first of which, called the Milliarian Cohort, was composed of Men selected on Account of their Circumstances, Birth, Education, Person, and Bravery. The Tribune who commanded them was likewise distinguished for his Skill in his Exercises, for the Advantages of his Person, and the Integrity of his Manners. The other Cohorts were commanded, according to the Emperor's Pleasure, either by Tribunes or other Officers commissioned for that Purpose. In former Times the Discipline was so strict, that the Tribunes or Officers abovementioned, not only caused the Troops under their Command to be exercised daily in their Presence, but were themselves so perfect in their military Exercises as to set them the Example *. Nothing does so

* Set them the Example.] Silius Italicus gives an elegant Description of Scipio's Expertness in military Exercises. Lib. 8.

Ipse inter medios venturæ ingentia Laudis
Signa dabat; vibrare Sudem, transmittere Saltu
Murales Fossas, undosum frangere nando
Indutus Thoraca Vadum, Spectacula tantæ
Ante Acies Virtutis erant: sæpe alite Planta
Ilia perfoffum, & Campi per aperta volantem
Ipse Pedes prævertit Equum: sæpe arduus idem
Callorum Spatium & Saxo transmissit & Hasta.

much

much Honor to the Abilities and Application of the Tribune, as the Appearance and Discipline of the Soldiers, when their Apparel is neat and clean, their Arms bright and in good Order, and when they perform their Exercises and Evolutions with Dexterity.

The chief Ensign of the whole Legion is the Eagle, and carried by the Eagle-Bearer. Each Cohort has also its own peculiar Ensign the Dragon, carried by the Draconarius. The Ancients, knowing the Ranks were easily disordered in the Confusion of Action, to remedy this Inconvenience, divided the Cohorts into Centuries, and gave each Century an Ensign, inscribed with the Number both of the Cohort and Century, that the Men, keeping it in Sight, might be prevented from separating from their Comrades in the greatest Tumults. Besides, the Centurions, now called Centenarii, were distinguished by the different Crests on their Helmets *, to be

XIII. Centuries and Ensigns of the Foot.

more

* Different Crests on their Helmets.} Orig. transversis Cassidum Cristis; and afterwards, Signum habebat in Galea, speaking of the Centurion. See Sect. 16. This Passage is much corrupted in the Original. We understand, however, that the Centurions had some particular Mark on their Helmets, to be distinguished by the Soldiers of their respective Centuries, but not what it was. We know the private Men had only small Crests; and that those of the Officers were often ornamented with Plumes of a large

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more easily known by the Soldiers of their respective Centuries. These Precautions prevented any Mistake, as every Century was guided not only by its own Ensign, but likewise by the peculiar Form of the Helmet of its commanding Officer. The Centuries were also subdivided into Messes of ten Men each, who lay in the same Tent, and were under the Orders and Inspection of a Decanus or Head of the Mess. These Messes were also called Maniples *, from their constant Custom of fighting together in the same Company or Division.

Size, and with Gold and Silver, and reached sometimes quite cross the Helmet; which may, perhaps, be the Meaning of Vegetius,

* These Messes were also called Maniples.] Orig. Con-
tubernium autem Manipulus vocabatur, ab eo quod con-
junctia Manibus pariter dimicabant. This Derivation is
quite different from the received Opinion, and perhaps
never existed but in Vegetius's Imagination. The Word
Manipulus signifies a Handful or Wisp of Hay, which the
Soldiers, in the Time of Romulus, carried on a Pole for an
Ensign. The Form of it was altered in succeeding Times,
but the Name remained, Ovid explains it very clearly,
Fast. III, 113.

Non illi Cæle labentia Signa tenebant,
Sed sua, quæ magnum perdere Crimen erat.
Illa quidem Fœno; sed erat Reverentia Fœno,
Quantam nunc Aquilæ cernis habere tuas,
Pertica suspensos portabat longa Maniplos,
Vnde Manipularis Nomina Miles habet.

* As the Divisions of the Infantry are called Centuries, so those of the Cavalry are called Troops. A Troop consists of thirty two Men, and is commanded by a Decurion. Every Century has its Ensign, and every Troop its Standard. The Centurion in the Infantry is chosen for his Size, Strength and Dexterity in throwing his missive Weapons, and for his Skill in the Use of his Sword and Shield; in short, for his Expertness in all the Exercises: he is to be vigilant, temperate, active, and readier to execute the Orders he receives than to talk: strict in exercising and keeping up proper Discipline among his Soldiers, in obliging them to appear clean and well-dressed †, and to have their Arms constantly rubbed and bright. In like Manner the Decurion is to be preferred to the Command of a Troop for his Activity, and Address in mounting his Horse completely armed; for his Skill in riding,

XIV. Legionary Troops of Horse.

* In the Original this Section begins thus: *Quemadmodum inter Pedites Centuria vel Manipulus appellatur, ita inter Equites Turma dicitur. Et habet una Turma Equites 32. Huic qui præest, Decurio nominatur. Ut enim centum Pedites ab uno Centurione, sub uno Vexillo gubernantur, similiter 32 Equites ab uno Decurione, sub uno Vexillo reguntur.* I have here made some Alterations, to avoid an inelegant and useless Repetition. Vegetius here confounds the Manipule with the Century.

† Clean and well-dressed. Orig. bene vestiti & calceati sunt.

and in the Use of the Lance and Bow; for his Attention in forming his Men to all the Evolutions of the Cavalry; and for his Care in obliging them to keep their Cuirasses, Lances, and Helmets always bright and in good Order. The Splendor of the Arms has no inconsiderable Effect in striking Terror into an Enemy. Can that Man be reckoned a good Soldier who thro' Negligence suffers his Arms to be spoiled by Dirt and Rust? In short it is the Duty of the Decurion to be attentive to whatever concerns either the Health or Discipline of the Men or Horses in his Troop.

XV. Manner of drawing up a Legion in Order of Battle.

We shall exemplify the Manner of drawing up an Army in Order of Battle in the Instance of one Legion, which may serve for any Number. The Cavalry are posted on the Wings. The Infantry begin to form on a Line with the first Cohort on the Right. The second Cohort draws up on the left of the first; the third occupies the Center; the fourth is posted next; and the fifth closes the left Flank. The Ordinarii, the other Officers, and the Soldiers of the first Line, ranged before and round the Ensigns, were called the Principes. They were all heavy armed Troops, and had Helmets, Cuirasses, Greaves, and Shields: their offensive Weapons were large Swords called *Spathæ*, and smaller ones called *Semispathæ*, together with five loaded Javelins in

in the Concavity of the Shield, which they threw at the first Charge. They had likewise two other Javelins, the largest of which was composed of a Staff five Feet and a Half long, and a triangular Head of Iron nine Inches long: this they formerly called *Pilum*, but it is now known by the Name of *Spiculum*. The Soldiers were particularly exercised in the Use of this Weapon, because, when thrown with Force and Skill, it often penetrated the Shields of the Foot, and the Cuirasses of the Horse. The other Javelin was of a smaller Size: its triangular Point was only five Inches long, and the Staff three Feet and a Half: it was anciently called *Verriculum*, but now *Verutum*. The first Line, as I said before, was composed of the *Principes*: the *Hastati* formed the second, and were armed in the same Manner. In the second Line* the sixth Cohort was posted on the right Flank, with the seventh on its Left; the eighth drew up in the Center; the ninth was the next; and the tenth always closed the left Flank. In the Rear of these two Lines were the *Ferentarii*, light In-

* In the second Line the sixth Cohort.] I have followed the French Translator in transposing some Sentences in this Place. Vegetius mentions the light Troops before the *Hastati* who formed the second Line. But both the Order of Tactics and the Connection require this Alteration.

fantry,



fantry*, and the Troops armed with Shields, loaded Javelins, Swords, and common missive Weapons, much in the same Manner as our modern Soldiers. This was also the Post of the Archers, who had Helmets, Cuirasses, Swords, Bows, and Arrows; of the Slingers who threw Stones with the common Sling or with the Fustibalus; and of the Trægularii† who annoyed the Enemy with Arrows from the Manubalistæ or Arcubalistæ.

XVI. Arms
of the Cen-
turions and
Triarii.

In the Rear of all the Lines, the Triarii, completely armed, were drawn up. They had Shields, Cuirasses, Helmets, Greaves, Swords and Daggers, loaded Javelins, and two of the common missive Weapons. They rested, during the Action, on one Knee, that if the first Lines

* Light Infantry.] After this we find in the Original, *Quos nunc Exculcatores & Armaturas dicimus*. The Critics are strangely puzzled about the first Word; and the latter is so differently used by Vegetius, that it is impossible to tell what to make of it. The French Translator calls it his magic Word, which he uses in any Signification he pleases. Some, instead of *Exculcatores*, read *Auxiliatores*, *Scultatores*, *Excursatores*, *Scutatores*, &c. The Uncertainty of the Passage will justify my omitting it.

† Trægularii.] They were so denominated from barbed Arrows, called *Trægulæ*, shot from the *Manubalistæ* and *Arcubalistæ*. The *Manubalistæ* were Hand-Balistæ; and the *Arcubalistæ* are commonly translated Cross-Bows: but I thought it best to leave them as they are in the Original.

were

were obliged to give Way, they might be fresh when brought up to the Charge, and thereby retrieve what was lost, and recover the Victory. All the Ensigns, tho' of the Infantry, wore Cuirasses of a smaller Sort, and covered their Helmets with the shaggy Skins of Beasts to make themselves appear more terrible to the Enemy: but the Centurions had complete Cuirasses, Shields, and Helmets of Iron, the Crests of which, placed transversely thereon, were ornamented with Silver, that they might be the more easily distinguished by their respective Soldiers.

The following Disposition deserves the greatest Attention. In the Beginning of an Engagement, the first and second Lines remained immoveable on their Ground, and the Triarii in their usual Position. The light-armed Troops, composed as abovementioned *, advanced in the Front of the Line, and attacked the Enemy: if they could make them give Way, they pursued them; but if they were repulsed by their superior Bravery or Numbers, they retired behind their own heavy-armed Infantry, which appeared, to use the Expression, like a Wall of Iron, and which

XVII. The heavy-armed Troops in moveable in Action.

† Composed as abovementioned.] In the Original the light Troops are all again particularised as above. A Repetition equally unnecessary and tiresome.

renewed

renewed the Action, at first with their missive Weapons, then Sword in Hand: if they broke the Enemy, they never pursued them, lest they should break their Ranks, or throw the Line into Confusion; and lest the Enemy, taking Advantage of their Disorder, should return to the Attack, and destroy them without Difficulty. The Pursuit, therefore, was entirely left to the light-armed Troops and the Cavalry. By these Precautions and Dispositions, the Legion was victorious without Danger, or if the contrary happened, was preserved without any considerable Loss: for as it is not calculated for Pursuit, it is likewise not easily thrown into Disorder.

XVIII.
Names and
Ranks of
the Soldiers
inscribed on
their Shields.

Lest the Soldiers, in the Confusion of Battle, should be separated from their Comrades, every Cohort had its Shields painted* in a Manner peculiar to itself: the Term for these distinguishing Marks is *Διστυμάλια*, and the Custom is still kept up. The Name of each Soldier was also wrote on his Shield, together with the Number of the Cohort and Century to which he belonged.

* Every Cohort had its Shields painted.] The Shields of the Roman Soldiers were often curiously painted and ornamented; and they were so careful as to keep them always covered. Cæsar, B. G. II, 21, speaking of the Surprise of his Troops by the Belgæ, says it was so sudden, that (among other Particulars) his Men had not Time to uncover their Shields.

From

From this Description, we may compare the Legion, when in proper Order, to a well fortified City, as containing within itself every Thing requisite in War, wherever it moved: it was secure from any sudden Attempt or Surprise of an Enemy by its expeditious Method of intrenching its Camp even in open Plains; and was always sufficiently provided with Troops and Arms of every Kind. To be victorious, therefore, over our Enemies in the Field, we must unanimously supplicate Heaven to dispose the Emperor to reform the Abuses in raising our Levies, and to recruit our Legions after the Method of the Ancients. The same Care in chusing and instructing our young Soldiers in all military Exercises and Evolutions, will soon make them equal to the old Roman Troops who subdued the whole World. Nor let this Alteration and Loss of ancient Discipline any Way affect Your Majesty, since it is a Happiness reserved for You alone both to restore the ancient Ordinances, and establish new ones for the public Welfare. Every Work, before the Attempt, carries in it an Appearance of Difficulty; but in this Case, if the Levies are made by careful and experienced Officers, an Army may be raised, disciplined, and rendered fit for Service, in a very short Time: for, the necessary Expences once provided, Diligence soon effects whatever it undertakes.

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Several

XIX. Writing and Accounts requisite in Recruits.

Several Posts in the Legion requiring Men of some Education, the Superintendants of the Levies, besides Size, Strength, and the proper Disposition for the Service, Qualifications to be attended to in general, should select some Recruits for their Skill in Writing* and Accounts. For the whole Detail of the Legion, including the Lists of the Soldiers exempted from Duty on private Accounts, the Rosters for their Tour of military Duties, and their Pay-Lists, is daily entered in the Legionary Books, and kept, we may almost say, with greater Exactness than the Regulations of Provisions or other civil Matters in the Registers of the Police. The daily Guards in Time of Peace, the advanced Guards and Out-Posts in Time of War, which are mounted regularly by the Centuries and Messes in their Turns, are likewise punctually kept in Rolls for that Purpose, with the Name of each Soldier whose Tour is past, that no one may have Injustice done him, or be excused from his Duty by Favor. They are also exact in entering the Time and Limitation of Furlows, which formerly were never granted without Difficulty, and only on real and urgent Business. They then never suffered the Soldiers to attend on any private Person, or to concern themselves in private Occupations; thinking it absurd and im-

* Writing.] Orig. Notarum Peritia. This is interpreted Writing in Short Hand, Cyphers, &c.

proper

proper, that the Emperor's Soldiers, clothed and subsisted at the public Expence, should follow any other Profession. Some Soldiers, however, were allowed for the Service of the Præfects, Tribunes, and even of the other Officers, out of the Number of the Accensi, or such as were raised after the Legion was complete: they are now called Supernumeraries *. The regular Troops were obliged to carry their Wood, Hay, Water, and Straw into the Camp themselves; and from such Kind of Services were called Munifices.

The Institution of the Ancients which obliged the Soldiers to deposit Half of every Donative † they received at the Colors was wise and judicious: the Intent was, to preserve it for their Use, that

XX. Custom of depositing Half of the Donatives at the Colors.

* Supernumeraries.] Orig. Supernumerarii. We find in Suetonius, that Claudius instituted a Kind of imaginary Soldiery (*imaginaria Militia*) with fixed Stipends, composed of absent Persons, who appeared only by Name. Claud. 25.

† Donative.] The Donatives were occasional Gratifications in Money given to the Soldiers by the Emperors on their Accession, Victories, &c. Suetonius tells us, that Domitian expressly forbid more than two Legions to encamp together, and that any Soldier should deposit above a thousand Sesterces at the Colors, because Antonius, when concerting his Revolt, seemed to have depended greatly on that Money. Domit. 7.

they might not squander it in Extravagance or idle Expence. for most Men,* particularly the poorer Sort, soon spend whatever they can get. A Reserve of this Kind, therefore, is evidently of the greatest Service to the Soldiers themselves: as they are maintained at the public Expence, their military Stock by this Method is continually increasing. The Soldier, who knows all his Fortune is deposited at his Colors, entertains no Thoughts of Desertion, conceives a greater Affection for them, and fights with greater Intrepidity in their Defence: he is also prompted thereto by Interest, the most prevailing Consideration among Men. This Money was contained in ten Bags, one for each Cohort. There was an eleventh Bag also, for a small Contribution from the whole Legion, as a common Fund to defray the Expence of the Sepulture* of any of their deceased Comrades. These Collections were kept in Baskets in the Custody of the Ensigns, chosen for their Inte-

* Sepulture.] The Ancients thought it the greatest Misfortune that could happen to be deprived of Sepulture. The Instances of their Care in burying the Dead after an Engagement are frequent in all the Poets and Historians. Tacitus, Annal. B. I, 61, 62, gives us a very fine Description of the Burial of the Remains of three Roman Legions cut to Pieces under the Command of Varus in Germany, six Years after that fatal Battle. Another Passage in our Author, Book V, 14, shows us how much they were affected with this Misfortune.

grity and Capacity, who were answerable for the Trust, and obliged to account with every Man for his own Proportion.

* Heaven certainly inspired the Romans with the Establishment of the Legion, so superior XXI. Promotions in the Legion. does it seem to human Invention. Such is the Arrangement and Disposition of the ten Cohorts that compose it, as to appear one perfect Body, and form one complete Whole. A Soldier, as he advances in Rank, proceeds as it were by Rotation thro' the different Degrees of the several Cohorts, in such a Manner, that one who is promoted passes from the first Cohort to the tenth, and returns again regularly, thro' all the others, with a continual Increase of Rank and Pay, to the first. Thus the Centurion of the Primiple, after having commanded in the different Ranks of every Cohort, attains that great Dignity in

* Heaven certainly inspired the Romans.] Orig. *Non tantum humano Consilio, sed etiam Divinitatis Instinctu, Legiones a Romanis arbitror constitutas.* The French Translator here finds Fault with the Original, and thinks the Enthusiasm of this Passage too great. But it is plain Marshal Saxe thought otherwise, when he translated this Sentence, *C'est sans Doute un Dieu qui leur inspira la Legion.* (*Traité des Legions*, p. 39.) And I am persuaded that the military Reader, so far from being displeased with these Expressions of Vegetius, will consider them as resulting from his Admiration of the Legion, and a full Conviction of its Excellence.

the

the first, with infinite Advantages from the whole Legion. The chief Præfect of the Prætorian Guards rises by the same Method of Rotation to that lucrative and honorable Rank. Thus the Legionary Horse contract an Affection for the Foot of their own Cohorts, notwithstanding the Antipathy naturally subsisting between the two Corps: and this Connexion establishes a reciprocal Attachment and Union between all the Cohorts, and the Cavalry and Infantry of the Legion.

XXII. The
Trumpet,
Cornet, and
Buccina.

The Music of the Legion consists of Trumpets, Cornets, and Buccinæ*. The Trumpet sounds the Charge and the Retreat. The Cornets are used only to regulate the Motions of the Colors; the Trumpets serve when the Soldiers are ordered out to any Work without the Colors; but in Time of Action, the Trumpets and Cornets sound together. The Clavicum, which is a particular Sound of the Buccina or Horn, is appropriated to the Command in chief, and is used in the Presence of the General, or at the Execution of a Soldier, as a Mark of its being done by his Authority. The ordinary Guards

* Trumpets, Cornets, and Buccinæ.] See these Instruments described, Book III. 5. This whole Chapter is very much corrupted in the Original. It is remarkable Vegetius never mentions the Lituus, the peculiar Instrument of the Cavalry.

and the Out-Posts are always mounted and relieved by Sound of Trumpet, which also directs the Motions of the Soldiers on Working-Parties, and on Field-Days. The Cornets sound whenever the Colors are to be struck, or to be planted. These Rules must be punctually observed in all Exercises and Reviews, that the Soldiers may be ready to obey them in Action without Hesitation, according to the General's Orders either to charge or halt, to pursue the Enemy or to retire. For Reason will convince us, that what is necessary to be performed in the Heat of Action, should constantly be practised in the Leisure of Peace.

The Establishment of the Legion being thus explained, let us return to the Exercises *. The XXIII. Exercises of the Troops. younger Soldiers and Recruits went thro' their Exercises of every Kind every Morning and Afternoon, and the Veterans and most expert constantly once a Day. Length of Service or Age alone will never form a military Man; for, after serving many Years, an undisciplined Soldier is still a Novice in his Profession. Not only those under the Masters at Arms, but all the Soldiers in general, were formerly trained incessantly

* Exercises.] Orig. Legionis Ordinatione digestis, ad Exercitium revertamur: unde (sicut jam dictum est) Exercitus Nomen accepit. The latter Part of this Sentence I have omitted as foreign to the Subject.

stantly in those Exercises, which now are only exhibited as Shows in the Circus on particular Solemnities. By Practice only can be acquired Agility of Body, and the Skill requisite to engage an Enemy with Advantage, especially in close Fight. But the most essential Point of all, is to teach Soldiers to keep their Ranks, and never abandon their Colors in the most difficult Evolutions: Men, thus trained, are never at a Loss amidst the greatest Confusion of Numbers. The Recruits likewise are to be exercised with wooden Swords at the Post, to be taught to attack this imaginary Antagonist on all Sides, and to aim at the Sides, Feet, or Head, both with the Point and Edge of the Sword: they must be instructed how to spring forward to give the Blow, to rise with a Bound above the Shield, and then to sink down and shelter themselves under Cover of it; in what Manner to advance and how to retire. They must also throw their Javelins at the Post from a considerable Distance, to acquire a good Aim, and to strengthen the Arm. The Archers and Slingers set up Bundles of Twigs or Straw for Marks, and generally struck them with Arrows, and with Stones from the Fustibalus, at the Distance of six hundred Feet. Thus they acquired Coolness and Exactness in Action from familiar Custom and Exercise in the Field. The Slingers
should

should be taught to whirl the Sling but once* about the Head before they cast the Stone: formerly all the Soldiers were trained to the Practice of throwing Stones of a Pound Weight with the Hand; which is thought the readier Method, as not requiring a Sling. The Use of the common missive Weapons and loaded Javelins was another Part of the Exercise strictly attended to. To continue this Discipline without Interruption during the Winter, they erected for the Cavalry Porticos or Riding-Houses, covered with Tiles or Shingles, and if they were not to be procured, with Reeds, Rushes, or Thatch: large open Halls were likewise constructed in the same Manner for the Use of the Infantry; by these Means the Troops were provided with Places of Exercise sheltered from bad Weather. But even in Winter, if it did not rain or snow, they were obliged to perform their Exercises in the Field, lest an Intermission of Discipline should affect both the Courage and Constitution of the Soldier. In short, both Legionary and Auxiliary Troops should be continually exercised in cutting

* But once about the Head.] Virgil, *Æn.* IX, 586, makes Mezentius whirl the Sling three Times round his Head, perhaps to cast the Stone with greater Force.

*Stridentem Fundam, positis Mezentius Armis,
Ipse ter adducta circum Caput egit Habena;
Et media adversi liquefacto Tempora Plumbo
Diffidit, ac multa porrectum extendit Arena.*

Wood, carrying Burdens, passing Ditches, swimming in the Sea or in Rivers, marching in the full Step and even running with their Arms and Baggage ; that, inured to Labor in Peace, they may find no Difficulty in War. For as the well trained Soldier is eager for Action, so does the untaught fear it : in War Discipline is superior to Strength ; but if that Discipline is neglected, there is no longer any Difference between the Soldier and the Peasant.

XXIV. War
compared
with other
Professions.

* Wrestlers, Hunters, Charioteers, for the Sake of inconsiderable Rewards or the Favor of the Populace, make it their constant Study to attain Perfection in their several Professions. Much more incumbent is it on a Soldier, on whom the Preservation of his Country depends, to make himself Master of the Science of War, and perfect himself in all its Branches by continual Practice. He has before him the Incitements, not only of Victory, but also of considerable Booty ; and may expect, by Seniority, and

* Wrestlers, Hunters, Charioteers.] These were the Actors in the Circensian Shows. The Exercise of Wrestling, and the Chariot-Races were very common : in the public Huntings they let loose Lions, Tigers, Leopards, Stags, Boars. &c. which were hunted and engaged by the Bestiarii, Men appointed or hired for that Purpose. They were given by the Emperors and great Men for the Entertainment of the People. Julius Cæsar gave one that lasted five Days successively.

his

his General's Attention to reward Merit, to rise to the most honorable and profitable Employments of the Service. Stage-Players, tho' applauded by the Public, continue their Application to their Business. How much more should the Soldier, whether Recruit or Veteran, engaged by Oath to the Service, labor indefatigably in the Exercise of his Profession, as it is his Duty to fight both for his own Safety, and the Liberty of his Country, and as the old Maxim is certain, that the very Essence of an Art consists in constant Practice ?

The Legion owes its Success to its Arms and Machines, as well as to the Number and Bravery of its Soldiers. In the first Place, every Century has a Balista *, mounted on a Carriage drawn by Mules, and served by a Mess, that is, ten Men† from the Century to which it belongs.

XXV. Machines and Tools of the Legion.

The

* Every Century has a Balista.] Orig. Carrobalista, a Balista mounted on a Carriage. In the preceding Sentence Vegetius says, *Primum omnium (Legio) instruitur Jaculis, quæ nullæ Loricæ, nulla possunt Scuta sufferre*: then he describes the Carrobalista, and immediately after repeats, speaking of the same Darts, *ad quarum Impetum, nec Equites loricati, nec Pedites scutati, possunt obflare*. I have thrown these two Sentences into one, to avoid Repetition.

† Ten Men.] Orig. *Singula Contubernia, hoc est, undecim Homines*. The Contradiction here is so evident to

M 2

what

The larger these Engines are, the greater Distance they carry, and with the greater Force. They are used not only to defend the Intrenchments of Camps, but are also placed in the Field in the Rear of the heavy-armed Infantry; and such is the Violence with which they throw the Darts, that neither the Cuirasses of the Horse nor Shields of the Foot can resist them. The Number of these Engines in a Legion is fifty five. Besides these, are ten Onagri, one for each Cohort; they are drawn ready-armed on Carriages by Oxen: in Case of an Attack they defend the Works of the Camp, by throwing Stones, as the Balistæ do Darts. The Legion carries with it a Number of small Boats, each hollowed out of a single Piece of Timber, with long Cables and sometimes Iron Chains, to fasten them together: these Boats, * joined and covered with Planks, serve as Bridges over unfordable Rivers, on which both Cavalry and Infantry pass without Danger. It is provided with Iron Hooks called Wolves, and Iron Scithes fixed to

what Vegetius expressly says in the thirteenth Section of this Book, that each *Triplex* consisted of ten Men, and the Alteration is right, that I have admitted it without Scruple. Besides it is most likely that a complete File, commonly supposed to have consisted of ten Men, who lay in the front of the Legion, was allotted for the Service of the Engine.

* [These boats.] Orig. *Monoxýli*; a Greek Word signifying the same Thing.

the

the Ends of long Poles; and with Forks, Spades, Shovels, Pickaxes, Wheelbarrows, and Baskets, for digging and transporting Earth; together with Hatchets, Axes, and Saws, for cutting and sawing Palifades, and all Kinds of Wood. Besides which, a Train of Workmen attend on it furnished with all Instruments necessary for the Construction of Tortoises, Musculi, Rams, Vines, moving Towers, and other Machines for the Attack of Places. As the Enumeration of all the Particulars of this Sort would be too tedious, I shall only observe that the Legion should carry with it, wherever it moves, whatever is necessary for every Kind of Service, that the Encampments may have all the Strength and Conveniences of a fortified City.

END OF BOOK II.

MILITARY INSTITUTIONS

OF

VEGETIUS.

B O O K I I I .

TO THE

EMPEROR VALENTINIAN.

P R E F A C E .

THE Athenians and Lacedæmonians were Masters of Greece before the Macedonians, as History informs us. The Athenians excelled not only in War, but in other Arts and Sciences : the Lacedæmonians made War their chief Study. They are affirmed to be the first who reasoned on the Events of Battles, and committed their Observations thereon to Writing, with such Success, as to reduce the military Art, before considered as totally dependant on Courage
or

or Fortune, to certain Rules and fixed Principles: in Consequence whereof they established Schools of Tactics for the Instruction of Youth in all the Manœuvres of War. How worthy of Admiration are these People, for particularly applying themselves to the Study of an Art, without which no other Art can possibly subsist! The Romans followed their Example, and both practised their Institutions in their Armies, and preserved them in their Writings. These are the Maxims and Instructions, dispersed thro' the Works of different Authors, which Your Majesty has ordered me to abridge; as the Perusal of the whole would be too tedious, and the Authority of only a Part unsatisfactory. The Effect of the Lacedæmonian Skill in Dispositions for general Actions, appears evidently in the single Instance of Xantippus, who assisted the Carthaginians after the repeated Ruin of their Armies, and merely by superior Skill and Conduct defeated Attilius Regulus at the Head of a Roman Army till that Time always victorious, took him Prisoner, and thus terminated the War by a single Action. Hannibal also, before he set out on his Expedition into Italy, chose a Lacedæmonian * for his Counsellor in military Operations;

* Lacedæmonian.] This, perhaps, was either Sofilus or Philenius, two Lacedæmonians who accompanied Hannibal in all his Expeditions. They have been generally
taken

Operations; and by his Advice, tho' inferior to the Romans both in Number and Strength, overthrew so many Consuls and such mighty Legions. He, therefore, who desires Peace, should prepare for War: he who aspires to Victory, should spare no Pains to form his Soldiers: and he who hopes for Success, should fight on Principle, not Chance. No one dares to offend or insult a Power of known Superiority in Action.

taken for Men of Letters only, which the Carthaginian General knew very well how to do without. (French Translator.)

B O O K III.

SECTION. I. Number whereof an Army should consist. II. Means of preserving it in Health. III. Care requisite to provide Forage and Provisions. IV. Methods to prevent Mutiny in an Army. V. Military Signals. VI. Marches in the Neighborhood of the Enemy, VII. Passages of Rivers. VIII. Rules for encamping an Army. IX. Motives for the Plan of Operations of a Campaign. X. How to manage raw and undisciplined Troops. XI. Preparations for a general Engagement. XII. The Dispositions of Troops to be sounded before Battle. XIII. Choice of the Field of Battle. XIV. Order of Battle. XV. The proper Distances and Intervals. XVI. Disposition of the Cavalry, XVII. Reserves. XVIII. Post of the General, and of the second and third in Command. XIX. Manœuvres in Action. XX. Various Dispositions for engaging. XXI. The Flight of an Enemy not to be prevented, but facilitated. XXII. Manner of conducting a Retreat. XXIII. Camels, and Cavalry called Cataphracti. XXIV. Armed Chariots and Elephants. XXV. Resources in Case of a Defeat. XXVI. General Maxims.

SECT. I.
Number
whereof an
Army should
consist.

THE first Book treats of the Choice and Exercises of new Levies; the second explains the Establishment of the Legion and the Method of Discipline; and the third contains the Dispositions for Action. By this methodical Progress,

Progreſſion, the following Inſtructions on general Actions, and the Means of Victory, will be better underſtood, and of greater Uſe. By an Army is meant a Number of Troops, Legions and Auxiliaries, Cavalry and Infantry, aſſembled to make War: this Number is limited by Judges of the Profeſſion. The Deſeats of Xerxes, Darius, Mithridates, and other Monarchs, who brought innumerable Multitudes into the Field, plainly ſhow, that the Deſtruction of ſuch prodigious Armies is owing more to their own Numbers, than to the Bravery of their Enemies. An Army too numerous, is ſubject to many Dangers and Inconveniencies: its Bulk makes it ſlow and unwieldy in its Motions: and as it is obliged to march in Columns of great Length, it is expoſed to the Riſque of being continually harrasſed and inſulted by inconfiderable Parties of the Enemy. The Incumbrance of the Baggage is often an Occaſion of its being ſurprized in its Paſſage thro' difficult Places or over Rivers. The Difficulty of providing Forage for ſuch Numbers of Horſes and other Beaſts of Burden is very great. Beſides, Scarcity of Proviſions, which is to be carefully guarded againſt in all Expeditions, ſoon ruins ſuch large Armies, where the Conſumption is ſo prodigious, that notwithſtanding the greateſt Care in filling the Magazines, they in a ſhort Time muſt begin to fail; and ſometimes they will unavoidably be

distressed for Want of Water. But if unfortunately this immense Army should be defeated, the Numbers lost must necessarily be very great; and the Remainder, who save themselves by Flight, too much dispirited to be brought again to Action. The Ancients, taught by Experience, preferred Discipline to Numbers. In Wars of lesser Importance, they thought one Legion, with Auxiliaries, that is, ten thousand Foot and two thousand Horse, sufficient; and often gave the Command to a Prætor as to a General of the second Rank. When the Preparations of the Enemy were formidable, they sent a General of Consular Dignity with twenty thousand Foot and four thousand Horse: and in our Times this Command is given to a Count of the first Order*. But when there happened any dangerous Insurrection supported by infinite Multitudes of fierce and barbarous Nations, on such Emergencies they took the Field with two Armies under the two Consuls, who were charged both singly and jointly, to take Care to preserve the Republic from Danger. In short, by this Management, the Romans, almost continually engaged in War with different Nations in differ-

* Count of the first Order.] Orig. *tanquam Comes major mittabatur*. In our Author's Time there were Counts of the first, second, and third Order. We find them mentioned in the 2d, 9th, 10th, and 17th Sections of this Book.

ent Parts of the World, found themselves able to oppose them in every Quarter: and the Excellence of their Discipline made their small Armies sufficient to encounter all their Enemies with Success. But it was an invariable Rule in their Armies, that the Number of Allies or Auxiliaries should never exceed that of the Roman Citizens.

The next Article is of the greatest Importance; II. Means of preserving it in Health. the Means of preserving the Health of the Troops. This depends on the Choice of Situation and Water, on the Season of the Year, Medicine, and Exercise. As to Situation, the Army should never continue any Time in the Neighborhood of unwholesome Marshes, or on dry Plains or Eminences without some Sort of Shade or Shelter. In the Summer, the Troops should never encamp without Tents: and their Marches, in that Season of the Year when the Heats are excessive, should begin by Break of Day, that they may arrive at the Place of Destination in good Time; otherwise they will contract Diseases from the Heat of the Weather and the Fatigue of the March. In a severe Winter they should never march in the Night in Frost and Snow, or be exposed to Want of Wood or Clothes. A Soldier, starved with Cold, can neither be healthy nor fit for Service. The Water must be wholesome and not marshy: bad
Water

Water is a Kind of Poison, and the Cause of epidemic Distempers. It is the Duty of the Officers of the Legion, of the Tribunes, and even of the Commander in chief* himself, to take Care that the sick Soldiers are supplied with proper Diet, and diligently attended by the Physicians: for little can be expected from Men who have both the Enemy and Diseases to struggle with. However, the best Judges of the Service have always been of Opinion that daily Practice of the military Exercises is much more efficacious towards the Health of an Army, than all the Art of Medicine: for this Reason, they exercised their Infantry without Intermiſſion, if it rained or snowed under Cover, and in fine Weather in the Field. They were also assiduous in exercising their Cavalry, not only in Plains, but also in uneven Ground, broken, and cut with Ditches: the Horses as well as the Men were thus trained, both on the abovementioned Account, and to prepare them for Action. Hence we may perceive the Importance and Necessity of a strict Observance of the military Exercises in an Army, since Health in the Camp, and Victory in the Field, depend on them. If a numerous Army continues long in one Place in the Summer or in the Autumn, the Waters be-

* Commander in Chief.] Orig. *Iplius Comitis, qui majorem sustinet Potestatem.*

come corrupt, and the Air infected; from whence proceed malignant and fatal Distempers, which nothing but frequent Change of Encampments can prevent.

* Famine makes greater Havoc in an Army than the Enemy, and is more terrible than the Sword. Time and Opportunity may help to retrieve other Misfortunes; but where Forage and Provisions have not been carefully provided, the Evil is without Remedy. The main and principal Point in War is to secure Plenty of Provisions, and to destroy the Enemy by Famine. An exact Calculation must therefore be made, before the Commencement of the War, of the Number of Troops, and the Expences incident thereto, that the Provinces may timely furnish the Forage, Corn, and all other Kinds of Provisions demanded of them, to be transported, in more than sufficient Quantity, into the strongest and most convenient Cities, before the Opening of the Campaign. If the Provinces cannot raise their Quotas in Kind, they must compound for them in Money, to be employed in procuring all Things requisite for the Service: for the Possessions of the Subject can no otherwise be

III. Care requisite to provide Forage and Provisions,

* Famine, &c.] This Section in the Original begins, *Ordo postulat, ut de Commeatu Pabuli Frumentique dicatur; sæpius enim Penuria, &c.* This Preface I have omitted.

secured

secured than by the Defence of Arms. These Precautions often become doubly necessary, as a Siege is sometimes protracted beyond Expectation; the Besiegers resolving to suffer themselves all the Inconveniences of Want sooner than raise the Siege, if they have any Hopes of reducing the Place by Famine. Edicts should be issued out, requiring the Country People to convey their Cattle, Grain, Wine, and all Kinds of Provisions that may be of Service to the Enemy, into garrisoned Fortresses, or into the safest Cities: and if they do not comply with the Order, proper Officers * are to be appointed to compel them to it. The Inhabitants of the Province must likewise be obliged to retire with their Effects into some fortified Place, before the Irruption of the Enemy. The Fortifications, and all the Machines of different Kinds must also be examined and repaired in Time: for if you are once surpris'd by the Enemy before you are in a proper Posture of Defence, you are thrown into irrecoverable Confusion; and you can no longer draw any Assistance from the neighboring Places, all Communication with them being cut off. But a faithful Management of the Magazines, and a frugal Distribution of the Provisions, with proper Precautions taken at first, will ensure sufficient Plenty: when Pro-

* Proper Officers.] Orig. per electos Perscrutatores, or as otherwise read, Prosecutores, Persecutores, or Executores.

visions once begin to fail, Parsimony is ill-timed, and comes too late. On difficult Expeditions the Ancients distributed the Provisions at a fixed Allowance to each man without Distinction of Rank; and when the Emergency was past, the Government accounted for the full Proportions *. The Troops should never want Wood and Forage in Winter, or Water in Summer; and should have Corn, Wine, Vinegar, and even Salt, in Plenty at all Times. Cities and Fortresses are garrisoned by such Men as are least fit for the Service of the Field; and are provided with all Sorts of Arms, Arrows, Fustibali, Slings, Stones, Onagri, and Balistæ, for their Defence. Great Caution is requisite that the unsuspecting Simplicity of the Inhabitants be not imposed on by the Treachery or Perjury of the Enemy: for pretended Conferences and deceitful Appearances of Truces have often been more fatal than open Force. By observing the foregoing Precautions, the Besieged may have it in their Power to ruin the Enemy by Famine, if he keeps his Troops together, and if he divides them, by frequent Sallies and Surprisals.

An Army drawn together from different Parts sometimes is disposed to Mutiny : and the Troops,

IV. Methods to prevent Mutiny in an Army.

* Proportions.] We find, Book I, 13, and II, 7, that several Classes of Soldiers were distinguished by a double Allowance of Provisions.

tho' not inclined to fight, pretend to be angry at not being led against the Enemy: which seditious Disposition principally shows itself in such as have lived in their Quarters in Idleness and Effeminacy. These Men, unaccustomed to the necessary Fatigue of the Field, are disgusted at its Severity; their Ignorance of Discipline makes them afraid of Action, and inspires them with Insolence. There are several Remedies for this Evil. While the Troops are yet separated, and each Corps continues in its respective Quarters, let the Tribunes, their Lieutenants, and the Officers in general, make it their Business to keep up so strict a Discipline as to leave them no Room to harbor any Thoughts but of Submission and Obedience. Let them be constantly employed either in Field-Days, or in the Inspection of their Arms; and not be allowed to be absent by Furlow: let them be frequently called over by the Roll, and trained to the exact Observance of every Signal: let them be exercised in the Use of the Bow, in throwing missive Weapons, and Stones both with the Hand and Sling, and with the wooden Sword at the Post*: let all this be continually repeated, and let them be often kept under Arms till they are tired. Let them be exercised in running and leaping, to facilitate the passing of Ditches: and if their

* At the Post.] Orig. ad Vestes (jactandos) pro Similitudine Gladium, &c. See the Note, Book I, Sect. 9.

Quarters are near the Sea or a River, let them all, without Exception, be obliged in the Summer to the frequent Practice of swimming. Let them be accustomed to march thro' Thickets, Inclosures, and broken Grounds, to fell Trees, and cut out Timber, to break Ground, and to defend a Post against their Comrades who are to endeavor to dispossess them; and in the Encounter each Party should use their Shields to dislodge and bear down their Antagonists. All the different Kinds of Troops, thus trained and exercised in their Quarters, will find themselves inspired with Emulation for Glory and Eagerness for Action, when they come to take the Field. In short, a Soldier who has proper Confidence in his own Skill and Strength, entertains no Thought of Mutiny. A General should be attentive to discover the turbulent and seditious Soldiers in the Army, in the Legions or Auxiliaries, Cavalry or Infantry; he should endeavor to procure his Intelligence, not from Informers, but from the Tribunes, their Lieutenants, and other Officers of undoubted Veracity: it would then be prudent in him to separate them from the rest, under Pretence of some Service agreeable to them, or detach them to garrison Cities or Castles; but with such Address, that tho' he wants to get rid of them, they may think themselves employed by Preference and Favor. A Multitude never break out into open Sedition at

once and with unanimous Consent: they are prepared and excited by some few Mutineers, who hope to secure Impunity for their Crimes by the Number of their Associates. But if the Height of the Mutiny requires violent Remedies, it will be most advisable, after the Manner of the Ancients, to punish the Ring-leaders only, that tho' few suffer, all may be terrified by the Example. But it is much more to the Credit of a General to form his Troops to Submission and Obedience by Habit and Discipline, than to be obliged to force them to their Duty by the Terror of Punishment.

V. Military Signals.

* The Nature of military Service is such, that in Action Errors cannot be committed with Impunity: the Particulars necessary to be observed are many and various; but none more essential to Success than entire Obedience to Signals: on this depend both the Victory and Safety of the Troops. As it is impossible, in the Tumult of Battle, to govern an Army by the Voice alone, and as a critical Moment often requires immediate Orders and instant Movements, all Nations invented Signals to communicate the General's Orders to the whole Army. Signals are of three Kinds, Vocal, Semivocal, and Mute. The Vocal and Semivocal are conveyed by the Ear, and

* The Nature of military Service.] I have here taken a little Liberty with the Original.

the

the Mute by the Eye. Vocal Signals, so called from being formed by the human Voice, are the Words generally given for the Guards and for an Engagement, as Victory, the Palm, Valor, God with us, the Triumph of the Emperor, or any other which the Commander in chief thinks proper to give. These Words, however, should be changed every Day, that the Enemy may not discover them, and their Spies range the Army with Impunity. Semivocal Signals are given by the Trumpet, Cornet, or Buccina. The Trumpet is an Instrument made of Brass and strait: the Buccina is of the same Metal bent into a Circle: the Cornet is made of the Horn of the Urus* or wild Bull, adorned and tipped with Silver, and is heard at a great Distance when sounded with Skill. The particular Sounds of these Instruments, which cannot be mistaken, direct the Army whether to halt or advance, to pursue the Enemy or retreat. Mute Signals are the Eagles, Dragons, Standards, red Guidons, and the Crests of the Helmets of the Officers, which the Soldiers are to follow wherever they move by the General's Orders. There are also other mute Signals directed by the General to be fixed on the Horses, Clothes, or Arms of the Men, to distinguish them from the Enemy: he

* Urus or wild Bull.] See the Description of this Animal in Cæsar, Bell. Gall. VI, 27.

has,

has, besides, other Methods of signifying his Directions by the Motion of his Staff, of his Hand, or of his Robe, after the Manner of the Barbarians. The Troops must be accustomed to understand and obey all these Signals in all Exercises in their Quarters, on Marches, and in their Camps: for it must be allowed that the Discipline and Evolutions required in the Confusion of Action cannot be too often practised in Time of Peace. The Cloud of Dust raised by the March of an Army, as it discovers its Approach, may also be considered as a mute and common Signal. It is likewise usual for Bodies of Troops at a Distance from each other, if they have no other Means, to convey Intelligence by Fires in the Night and Smoke in the Day. Sometimes large Beams of Timber are suspended on the Towers of Castles and Cities, which they raise or lower, in order to give Notice of what passes within.

VI. Marches
in the
Neighbour-
hood of
the Enemy.

It is asserted by those who have made the Profession their Study, that an Army is exposed to more Danger on Marches, than in Battles. In an Engagement, the Men are properly armed, they see their Enemies before them, and come prepared to fight: but on a March, the Soldier is less on his Guard, has not his Arms always ready, and is thrown into Disorder by a sudden Attack or Ambuscade. A General therefore cannot

cannot be too careful and diligent in taking necessary Precautions to prevent a Surprise on the March; and in making proper Dispositions to repulse the Enemy, in Case of such Accident, without Loss. In the first Place, he should have an exact Description of the Country that is the Seat of War, in which the Distances of Places specified by the Number of Miles, the Nature of the Roads, the shortest Routes, By-Roads, Mountains, and Rivers, should be correctly inserted. We are told that the greatest Generals have carried their Precautions on this Head so far, that not satisfied with the simple Description of the Country wherein they were engaged, they caused Plans to be taken of it on the Spot, that they might regulate their Marches by the Eye with greater Safety. A General should also inform himself of all these Particulars from Persons of Sense and Reputation well-acquainted with the Country, by examining them separately at first, and then comparing their Accounts, in order to come at the Truth with Certainty. If any Difficulty arises about the Choice of Roads, he should procure proper and skilful Guides: he should put them under a Guard, and spare neither Promises nor Threats to induce them to be faithful. They will acquit themselves well, when they know it is impossible to escape, and are certain of being rewarded for their Fidelity, or punished for their Perfidy. He must be sure
of

of their Capacity and Experience, that the whole Army be not brought into Danger by the Errors of two or three Persons: for sometimes the common Sort of People imagine they know what they really do not, and thro' Ignorance promise more than they can perform. But of all Precautions the most important is, to keep entirely secret which Way or by what Route the Army is to march: for the Security of an Expedition depends on the Concealment of all Motions from the Enemy. The Figure of the Minotaur was anciently among the Legionary Ensigns, signifying, that as this Monster, according to the Fable, was concealed in the most secret Recesses and Windings of the Labyrinth, so the Designs of a General should always be impenetrable. When the Enemy has no Intimation of a March, it is made with Security: but as sometimes the Scouts either suspect or discover the Decampment, or Traitors or Deserters give Intelligence thereof, it will be proper to mention the Method of acting in Case of an Attack on the March*. The General, before he puts his Troops in Motion, should send out Detachments of trusty and experienced Soldiers well-mounted, to reconnoitre the Places thro' which he is to march, in Front,

* Method of acting in Case of an Attack on the March.]
 Orig. *Quemadmodum occurrî ingruentibus debeat.* The French Translation, *Comment on peut se retourner en Cas d'Attaque,* does not answer the Sense of the Latin.

in Rear, and on the Right and Left, lest he should fall into Ambuscades. The Night is safer and more advantageous for your Spies to do their Business in than the Day: for if they are taken Prisoners, you are, as it were, betrayed yourself. After this, the Cavalry should march off first, then the Infantry; the Baggage, Bat-Horses, Servants, and Carriages, in the Center; and Part of the best Cavalry and Infantry in the Rear, as it is oftener attacked on a March than the Front. The Flanks of the Baggage, exposed to frequent Ambuscades, must also be covered with a sufficient Guard to secure them. But above all, the Part where the Enemy is most expected must be reinforced with some of the best Cavalry, with the light Infantry, and Foot-Archers. If surrounded on all Sides by the Enemy, you must make Dispositions to receive them wherever they come; and caution the Soldiers beforehand to keep their Arms in their Hands, and to be ready in order to prevent the bad Effects of a sudden Attack. Men are frightened and thrown into Disorder by sudden Accidents and Surprises of no Consequence when foreseen. The Ancients were very careful that the Servants or Followers of the Army, if wounded or frightened by the Noise of the Action, might not disorder the Troops while engaged, and also to prevent their either stragling or crowding one another too much, which might

P incommode

incommode their own Men, and give Advantage to the Enemy. They ranged the Baggage, therefore, in the same Manner as the regular Troops, under particular Ensigns: they selected from among the Servants the most proper and experienced, and gave them the Command of a Number of Servants and Boys, not exceeding two hundred: and their Ensigns directed them where to assemble the Baggage. Proper Intervals should always be kept between the Baggage and the Troops, that the latter may not be embarrassed for Want of Room, in Case of an Attack during the March. The Manner and Disposition of Defence must be varied according to the Difference of Ground. In an open Country, you are more liable to be attacked by Horse than Foot: but in a woody, mountainous, or marshy Situation, the Danger to be apprehended is from Foot. Some of the Divisions being apt thro' Negligence to move too fast, and others too slow, great Care is to be taken to prevent the Army from being broke or from running into too great a Length; as the Enemy would instantly take Advantage of the Neglect, and penetrate without Difficulty. The Tribunes, their Lieutenants, or the Masters at Arms of most Experience *, must therefore be posted at
proper

* Masters at Arms of most Experience.] Orig. Exercitissimi Campidoctores, Vicarii, vel Tribuni. The French Translator

proper Distances, to halt those who advance too fast, and quicken such as move too slow. The Men at too great a Distance in the Front, on the Appearance of an Enemy, are more disposed to fly than to join their Comrades; and those too far behind, destitute of Assistance, fall a Sacrifice to the Enemy and their own Despair. The Enemy, it may be concluded, will either plant Ambuscades, or make his Attack by open Force, according to the Advantage of Ground: Circumspection in examining every Place will be a Security against concealed Danger; and an Ambuscade, if discovered and properly surrounded, will retort the intended Mischief with Interest. If the Enemy prepare to fall upon you by open Force in a mountainous Country, Detachments must be sent forward to occupy the highest Eminences, that on their Arrival, they may not dare to attack you under such Disadvantage of Ground,

Translator here explains *Campidoctores*, "Officers généraux, and in a Note says he has hazarded that Expression, because in the Original Vegetius has placed them before the Tribunes. But as the Progression here seems to rise from the lowest Rank to the highest, and there is an Impropriety in the Epithet, if applied to General Officers, I have not altered the Term by which I have translated this Word in former Passages. We find, however, these Officers, *Campidoctores*, very differently employed: Book I, 13, their Business is to superintend the Exercises of the Troops; and Book III, 8, to distribute the Ground in an Encampment to the Centuries to intrench.

your Troops being posted so much above them, and presenting a Front ready for their Reception. It is better to send Men forward with Hatchets and other Tools, to open Ways that are narrow but safe, without Regard to their Labor, than to run any Risque in the finest Roads. It is necessary to be well acquainted whether the Enemy usually make their Attempts in the Night, at Break of Day, or in the Hours of Refreshment or Rest; and by the Knowledge of their Customs to guard against what we find their general Practice. We must also inform ourselves whether they are strongest in Infantry or Cavalry; whether their Cavalry is chiefly armed with Lances or with Bows; and whether their principal Strength consists in their Numbers or the Excellence of their Arms: which will enable us to take the most proper Measures to distress them, and for our Advantage. When we have a Design in View, we must consider whether it will be most advisable to begin the March by Day or by Night; we must calculate the Distance of the Places we want to reach; and take such Precautions that in Summer the Troops may not suffer for Want of Water on their March, nor be obstructed in Winter by impassable Morasses or Torrents; by which the Army would be exposed to great Danger before it could arrive at the Place of its Destination. As it highly concerns us to guard against these Inconveniences

ences with Prudence, so it would be inexcusable not to take Advantage of an Enemy that fell into them thro' Ignorance or Negligence. Our Spies should be constantly abroad; we should spare no Pains in tampering with their Men, and give all Manner of Encouragement to Deserters; by which Means we may get Intelligence of their present or future Designs: and we should constantly keep in Readiness some Detachments of Cavalry and light Infantry, to fall upon them, when they least expect it, either on the March, or when foraging or maroding.

The Passages of Rivers are very dangerous without great Precaution: in crossing broad or rapid Streams, the Baggage, Servants, and sometimes the most indolent Soldiers, are in Danger of being lost. Having first sounded the Ford, two Lines of the best-mounted Cavalry are ranged at a convenient Distance quite cross the River, that the Infantry and Baggage may pass between them. The Line above the Ford breaks the Violence of the Stream, and the Line below recovers and transports the Men carried away by the Current. When the River is too deep to be forded either by the Cavalry or Infantry, the Water is drawn off, if it runs in a Plain, by cutting a great Number of Trenches, and thus it is passed with Ease. Navigable Rivers are passed by Means of Piles driven into
the

VII. Passages of Rivers.

the Bottom and floored with Planks: or on a sudden Emergency, by fastening together a Number of empty Casks, and covering them with Boards. The Cavalry, throwing off their Accoutrements, make small Floats of dry Reeds or Rushes, on which they lay their Arms and Cuirasses to preserve them from being wet: they themselves swim their Horses cross the River, and draw the Floats after them by a leathern Thong. But the most commodious Invention is that of the small Boats, hollowed out of one Piece of Timber, and very light both by their Make and the Quality of the Wood: the Army always has a Number of these Boats, upon Carriages, together with a sufficient Quantity of Planks and Iron Nails; and thus, with the Help of Cables to lash the Boats together, a Bridge is instantly constructed, which for the Time has the Solidity of a Bridge of Stone. As the Enemy generally endeavor to fall upon an Army at the Passage of a River either by Surprise or Ambuscade, it is necessary to secure both Sides thereof by strong Detachments, that the Troops may not be attacked and defeated while separated by the Channel of the River: but it is still safer to palisade both the Posts, which will enable you to sustain any Attempt without much Loss. If the Bridge is wanted, not only for the present Transportation of the Troops, but also for their Return, and for Convoys, it will be proper to throw

throw up Works with large Ditches to cover each Head of the Bridge, with a sufficient Number of Men to defend them as long as the Circumstances of Affairs require.

* Having thus explained the Order of Marches, VIII. Rules for encamping an Army. we now come to the Description of the Camp. An Army on a Route cannot expect always to find walled Cities for Quarters, and it is very imprudent and dangerous to encamp in a straggling Manner without some Sort of Intrenchment: it being an easy Matter to surprise Troops while refreshing themselves, or dispersed in the different Occupations of the Service. The Darkeness of Night, the Necessity of Sleep, and the Dispersion of the Horses at Pasture, afford Opportunities of Surprise. A good Situation for a Camp is not sufficient, we must chuse the very best that can be found, lest, having omitted to occupy a more advantageous Post, the Enemy should get Possession of it to our great Detriment. An Army should not encamp in Summer near bad Waters, or far from good ones: nor in Winter in a Situation without Plenty of Forage and Wood: the Camp should not be liable to sudden Inundations; nor the Avenues too steep or too narrow, lest, if invested, the Troops

* This Section in the Original begins, *Consequens videtur, Itineris Observatione descripta, ad Castrorum (in quibus manendum est) venire Rationem. Non enim, &c.*

should

should find it difficult to make their Retreat ; nor should it be commanded by any Eminences, from whence it may be annoyed by the Enemy's Weapons. After these Precautions, the Camp is formed square, round, triangular, or oblong, according to the Nature of the Ground : for the Form of a Camp does not constitute its Goodness. Those Camps, however, are thought best, where the Length is one third more than the Depth. The Dimensions must be exactly taken by the Engineers*, that the Extent of the Camp may be proportioned to the Number of Troops. A Camp too much straitened will not permit the Troops to perform their Movements with Freedom, and one too extensive divides them too much. There are three Methods of intrenching a Camp. The first is, when the Army is on its March, and to continue in the Camp but one Night : they then throw up a slight Parapet of Turf, and plant it with a Row of Palisades or Caltrops of Wood. The Sods are cut with Instruments of Iron, and if the Earth is held strongly together by the Roots of the Grass, in the Form of a Brick, a Foot and a Half high, a Foot broad, and a Foot and a Half long. If the Earth is so loose, that the Turf cannot be cut in this Form, they run a slight Trench round the Camp, five Feet broad, and three

* Engineers.] Orig. Agri Menfores.

deep; the Earth taken from thence forms a Parapet on the Inside, and this secures the Army from Danger: this is the second Method. But standing Camps, either for Summer or Winter, in the Neighborhood of an Enemy, are fortified with greater Care and Regularity: for after the Ground is marked out by the proper Officers †, each Century receives a certain Number of Feet to intrench; they then range their Shields and Baggage in a Circle about their own Colors, and without other Arms than their Swords, open a Trench, nine, eleven, or thirteen Feet broad; or if under great Apprehensions of the Enemy, they enlarge it to seventeen Feet, it being a general Rule to observe odd Numbers: within this, they construct a Rampart with Fascines, or Branches of Trees, well fastened together with Pickets, that the Earth may be the better supported. Upon this Rampart they raise a Parapet with Battlements, as in the Fortifications of a City. The Centurions measure the Work with Rods ten Feet long, and examine whether every one has properly completed the Proportion assigned him. The Tribunes likewise inspect the Work, and should not leave the Place till the whole is finished. And that the Workmen may not be suddenly interrupted by the Enemy, all the Cavalry, and that Part of the Infantry exempted by

† Proper Officers.] *Orig. Dividentibus Campidoctoribus & Principiis.*

the Privilege of their Rank from working, remain in Order of Battle before the Intrenchment, to be ready to repel any Assault. The first Thing to be done, after intrenching the Camp, is to plant the Ensigns, held by the Soldiers in the highest Veneration and Respect, in their proper Places. After this, the Prætorium is prepared for the General and his Lieutenants, and the Tents pitched for the Tribunes, who have Soldiers particularly appointed for their Service, and to fetch their Water, Wood, and Forage. Then the Legions and Auxiliaries, Cavalry and Infantry, have the Ground distributed to them to pitch their Tents, according to the Rank of the several Corps. Four Foot-Soldiers of each Century, and four Troopers of each Troop, are on Guard every Night; and as it seemed impossible for a Sentinel to remain a whole Night on his Post, the Watches were divided by the Hour-Glass into four Parts, that each Man might stand only three Hours. All Guards are mounted by Sound of Trumpet, and relieved by Sound of Cornet. The Tribunes chuse proper and trusty Men to visit the different Posts, and report to them whatever they find amiss: this is now a military Office, and the Persons appointed to it are called Officers of the Rounds *. The Cavalry furnish the Grand

* Officers of the Rounds.] Orig. Circitores.

Guards by Night, and the Out-Posts by Day; which are relieved every Morning and Afternoon, in Consideration of the Fatigue of the Men and Horses. It is particularly incumbent on the General to provide for the Protection of the Pastures, and of the Convoys of Corn and other Provisions, either in Camp or Garrison; and to secure the Wood, Water, and Forage, against the Incurfions of the Enemy. This can only be effected by posting Detachments advantageously in the Cities or walled Castles on the Roads along which the Convoys advance: and if no ancient Fortifications are to be met with, slight Forts must be built in proper Situations, surrounded with large Ditches*, for the Reception of Detachments of Horse and Foot, whereby the Convoys will be effectually covered: for an Enemy will scarce venture far into a Country where he knows his Adversary's Troops are so disposed as to be ready to encompass him on all Sides.

Readers of this military Abridgment will perhaps be impatient for Instructions relative to general Engagements: but they should consider that a Battle is commonly decided in two or three Hours, after which no farther Hopes are

IX. Motives for the Plan of Operations of a Campaign.

* Forts with large Ditches.] In the Original follows the Derivation of the Word *Castella*; Nam a *Castris* diminuto Vocabulo sunt nuncupata *Castella*.

left for the worsted Army. Every Plan, therefore, is to be considered, every Expedient tried, and every Method taken, before Matters are brought to this last Extremity. Good Officers decline general Engagements, where the Danger is common, and prefer the Employment of Stratagem and Finesse, to destroy the Enemy as much as possible in Detail, and intimidate them without exposing their own Forces. I shall insert some necessary Instructions on this Head collected from the ancients. It is the Duty and Interest of a General frequently to assemble the most prudent and experienced Officers of the different Corps in the Army, and consult with them on the State both of his own and the Enemy's Forces: all Adulation, as most pernicious in its Consequences, must be banished from the Deliberations: he must examine which has the Superiority in Number; whether his or the Adversary's Troops are best armed; which are in best Condition, best disciplined, and most resolute in Emergencies. The State of the Cavalry of both Armies must be enquired into, and more especially that of the Infantry, wherein consists the main Strength of an Army. With respect to the Cavalry, he must endeavor to find out in which are the greatest Number of Archers, or of Troopers armed with Lances; which has most Cuirassiers, and which the best Horses. Lastly, he must consider the
Field

Field of Battle, to judge whether the Ground is more advantageous for him or his Enemy. If strongest in Cavalry, we should prefer Plains and open Ground : if superior in Infantry, we should chuse a Situation full of Inclosures, Ditches, Morasses and Woods, and sometimes mountainous. Plenty or Scarcity in either Army are Considerations of no small Importance : for Famine, according to the common Phrase, is an internal Enemy that makes more Havoc than the Sword. But the most material Article is to determine whether it is most proper to temporise, or to bring the Affair to a speedy Decision by Action. The Enemy sometimes expect an Expedition will soon be over ; and if it is protracted to any Length, they are either consumed by Want, induced to return home by the Desire of seeing their Families, or having done nothing considerable in the Field, disperse themselves from Despair of Success. Thus, Numbers tired out with Fatigue, and disgusted with the Service desert, others betray them, and many surrender themselves. Fidelity is seldom found in Troops disheartened by Misfortunes ; and in such Case, an Army numerous at taking the Field insensibly dwindles away to nothing. It is essential to know the Character of the Enemy, and of their principal Officers* ;

* Principal Officers.] Orig. Comites. There cannot be a stronger Proof of the Importance of this Maxim, than
the

whether they are rash or cautious; enterprising or timid; whether they fight on Principle or from Chance; and whether the Nations they have been engaged with were brave or cowardly. We must know how far to depend on the Fidelity and Strength of our Auxiliaries; how the Enemy's Troops, and our own, are affected; and which appear most confident of Success; a Consideration of great Effect in raising or depressing the Courage of an Army. A Harangue from the General, especially if he seems under no Apprehensions himself, may reanimate the Soldiers if dejected. Their Spirits revive, if any considerable Advantage is gained either by Stratagem or otherwise; if the Fortune of the Enemy begins to change; or if you can contrive to beat some of their weak or ill-armed Detachments. But you must by no Means venture to lead an irresolute or diffident Army to a general Engagement. The Difference is great whether your Troops are raw or Veterans; whether inured to War by recent Service, or for some Years unemployed: for Soldiers disused to fighting for a Length of Time, must be considered in the same Light as Recruits. As soon as the Legions, Auxiliaries, and Cavalry, are

the Attention with which Hannibal studied the Character and Temper of Flaminius, from which he derived all his Advantages over that rash and inconsiderate General. And Fabius ruined Hannibal himself by the very same Conduct.

assembled

assembled from their several Quarters, it is the Duty of a good General to have every Corps instructed separately in every Part of the Exercise, by Tribunes of known Capacity chosen for that Purpose: he should afterwards form them into one Body, and train them in all the Manceuvres of the Line as for a general Action. He must frequently exercise them himself to try their Skill and Strength, and to see whether they perform their Evolutions with proper Regularity, and are sufficiently attentive to the Sound of the Trumpets, the Motions of the Colors, and to his own Orders and Signals. If deficient in any of these Particulars, they must be instructed and exercised till perfect. But tho' thoroughly disciplined and complete in their Field-Exercises, in the Use of the Bow, and of the Javelin, and in the Evolutions of the Line, it is not advisable to lead them rashly or immediately to Battle: a favorable Opportunity must be watched for, and they must be first prepared by frequent Skirmishes and slight Encounters. Thus a vigilant and prudent General will carefully weigh in his Council the State of his own Forces, and of those of the Enemy, as a civil Magistrate judging between two contending Parties. If he finds himself in many Respects superior to his Adversary, he must by no Means defer bringing on an Engagement: but if he knows himself inferior, he must avoid general Actions, and endeavor to
succeed

succeed by Surprises, Ambuscades, and Stratagems, which skilfully managed by good Generals, have often given them the Victory over Enemies superior both in Number and Strength.

X. How
to manage
raw and un-
disciplined
Troops.

All Arts and Trades whatever are brought to Perfection by continual Practice. How much more should this Maxim, true in inconsiderable Matters, be observed in Affairs of Importance? and how much superior to all others is the Art of War, by which our Liberties are preserved, our Dignities perpetuated, the Provinces, and the whole Empire itself, subsist? The Lacedæmonians, and after them the Romans, were so sensible of this Truth, that to this Science they sacrificed all others: and the barbarous Nations, even at this Day, think this Art only worth Attention, believing it includes or confers every Thing else. In short, it is indispensably necessary for those engaged in War, not only instructing them in the Means of preserving their own Lives, but how to gain the Victory over their Enemies. A Commander in chief, therefore, whose Power and Dignity are so great, to whose Fidelity and Bravery the Fortunes of his Countrymen, the Defence of their Cities, the Lives of the Soldiers, and the Glory of the State, are intrusted, should not only consult the Good of the Army in general, but extend his Care and Concern to every private Soldier in it: for when

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any Misfortunes happen to those under his Command, they are considered as public Losses, and imputed entirely to his Misconduct. If therefore he finds his Army composed of raw Troops, or that have been long disused to fighting, he must carefully study the Strength, the Spirit, and the Manners of each particular Legion, and of each Body of Auxiliaries, Cavalry and Infantry; he must know, if possible, the Name and Capacity of every Count, Tribune, Subaltern, and Soldier; he must assume the most respectable Authority, and maintain it by Severity; he must punish all military Crimes with the greatest Rigor of the Laws; he must have the Character of being inexorable towards Offenders, and endeavor to give public Examples thereof in different Places and on different Occasions: Having once firmly established these Regulations, he must watch the Opportunity when the Enemy, dispersed in Search of Plunder, think themselves in Security, and attack them with Detachments of tried Cavalry or Infantry, intermingled with young Soldiers, or such as are under the military Age*: the Veterans will acquire fresh Experience, and the others will be inspired with Courage, by the Advantages such Opportunities will give him. He should form Ambuscades with the greatest Secrecy, to surprise the Enemy at

* Under the military Age.] Orig. Inferiores.

the Passages of Rivers, in the rugged Passes of Mountains, in the Defiles of Woods, and when embarrassed by Morasses or difficult Roads : he should regulate his March so as to fall upon them while taking their Refreshments, or sleeping, or at a Time when they suspect no Danger, and are dispersed, unarmed, and their Horses unsaddled : he should continue these Kinds of Encounters till his Soldiers have imbibed a proper Confidence in themselves. For Troops, that have never been in Action, or have not for some Time been used to such Spectacles, are greatly shocked at the Sight of the wounded and dying ; and the Impressions of Fear they receive from thence, dispose them rather to fly than fight. If the Enemy make Excursions or Expeditions, the General should attack them after the Fatigue of a long March, fall upon them unexpectedly, or harass their Rear. He should detach Parties to endeavor to carry off by Surprise any Quarters established at a Distance from their Army for the Convenience of Forage or Provisions. For such Measures should be pursued at first as can produce no very bad Effects, if they should happen to miscarry, but would be of great Advantage if attended with Success. A prudent General will also try to sow Division among his Adversaries ; for no Nation, tho' ever so weak in itself, can be completely ruined by its Enemies, unless its Fall be facilitated by its own Distractions : in civil
Dissensions

Diffentions Men are so intent on the Destruction of their private Enemies, that they are entirely regardless of the public Safety. One Maxim must be remembered throughout this Work; that no one should ever despair of effecting what has been already performed. It may be said, that our Troops for many Years past have not even fortified their standing Camps either with Ditches, Ramparts, or Palisades. The Answer is plain, if those Precautions had been taken, our Armies would never have suffered by Surprises of the Enemy both by Day and Night. The Persians, after the Example of the old Romans, surround their Camps with Ditches: and as the Ground in their Country is generally sandy, they always carry with them empty Bags, to fill with the Sand taken out of the Trenches, and raise a Parapet by piling them one on the other. All the barbarous Nations range their Carriages round them in a Circle, a Method which bears some Resemblance to a fortified Camp, and thus pass their Nights secure from Surprise. Are we afraid of not being able to learn from others what they before have learned from us? At present all this is to be found in Books only, tho' formerly constantly practised. Enquiries are now no longer made after Customs that have been so long neglected, because in the Midst of Peace War is looked upon as an Object too distant to merit Consideration. But former Instances will

convince us, that the Re-establishment of ancient Discipline is by no Means impossible, tho' now so totally lost. In former Ages the Art of War often neglected and forgot, was as often recovered from Books, and re-established by the Authority and Attention of our Generals. Our Armies in Spain, when Scipio Africanus took upon him the Command, were in bad Order, and had been often beat under preceding Generals: he soon reformed them by severe Discipline, and obliged them to undergo the greatest Fatigue in the different military Works, reproaching them that since they would not wet their Hands with the Blood of their Enemies, they should soil them with the Mud of the Trenches. In short, with these very Troops he afterwards took the City of Numantia, and burnt it to the Ground, with such Destruction of its Inhabitants that not one escaped. In Africa, an Army which under the Command of Albinus had been forced to pass under the Yoke, was by Metellus brought into such Order and Discipline, by forming it on the ancient Model, that they afterwards vanquished those very Enemies who had subjected them to that ignominious Treatment. The Cimbri defeated the Legions of Cæpio, Manilius, and Silanus,* in Gaul, but
Marius

* Cæpio, Manilius, and Silanus.] These Generals were M. Jun. Silanus, Manilius, and Q. Servilius Cæpio. In
Florus

Marius collected their shattered Remains, and disciplined them so effectually, that he destroyed, in one general Engagement, an innumerable Multitude of the Cimbri, Teutones, and Ambrones. Nevertheless, it is easier to form young Soldiers, and inspire them with proper Notions of Honor, than to reanimate Troops who have been once disheartened.

Having explained the less considerable Branches of the Art of War, the Order of military Affairs naturally leads us to a general Engagement; a Conjunction so full of Uncertainty and so fatal to Kingdoms and Nations; for in the Decision of a pitched Battle consists the Fulness of Victory. This Season, above all others, requires the Exertion of all the Abilities of a General, as his good Conduct on such an Occasion gains him greater Glory, or his Errors expose him to greater Danger and Disgrace. This is the Moment in which his Talents, Skill, and Experience, show themselves in their fullest Extent. Formerly, to enable the Soldiers to charge with greater Vigor, it was customary to order them a moderate Refreshment of Food be-

XI. Preparations for a general Engagement.

Florus we find the following Passage; Sed nec primum quidem Impetum Barbarorum Silanus, nec secundum Manilius, nec tertium Cæpio sustinere potuerunt: omnes fugati, exuti Castris. Actum erat, nisi Marius illi Seculo configisset. Lib. III. Cap. 3.

fore

fore an Engagement, that their Strength might be the better supported during a long Conflict. When the Army is to march out of a Camp or City, in Presence of their Enemies drawn up and ready for Action, great Precaution must be observed, lest they should be attacked as they desfile from the Gates, and cut to Pieces in Detail : proper Measures must therefore be taken; that the whole Army may be clear of the Gates, and formed in Order of Battle, before the Enemy's Approach. If they are ready before you can have quitted the Place, your Design of marching out must either be deferred till another Opportunity, or at least dissembled, that, when they begin to insult you on Supposition that you dare not appear, or think of nothing but plundering or returning, and no longer keep their Ranks, you may sally out with your best Troops in good Order, and fall upon them while in Confusion and Surprise. Troops must never be engaged in a general Action immediately after a long March, when the Men are fatigued and the Horses tired. The Strength required for Action is spent in the Toil of the March : What can a Soldier do who charges when out of Breath ? The Ancients carefully avoided this Inconvenience, but in latter Times, some of our Roman Generals, to say nothing more, have lost their Armies, by unskilfully neglecting this Precaution. Two Armies, one tired and spent, the other

other fresh and in full Vigor, the one out of Breath by running, and the other unruffled by any Motion, are by no Means an equal Match.

It is necessary to know the Sentiments of the Soldiers on the Day of an Engagement : and their Confidence or Apprehensions are easily discovered by their Looks, their Words, their Actions, and their Motions. No great Dependance is to be placed on the Eagerness of young Soldiers for Action : for fighting has something agreeable in the Idea to such as are Strangers to it. On the other Hand, it would be wrong to hazard an Engagement if the old experienced Soldiers testify a Disinclination to fight. A General, however, may encourage and animate his Troops by proper Exhortations and Harangues * ; especially if by his Account of the approaching Action he can persuade them into the Belief of an easy Victory. With this View, he should lay before them the Cowardice or Unskilfulness of their Enemies, and remind them of any former

XII. The Dispositions of Troops to be founded before Battle.

* Harangues.] The Custom of haranguing an Army was very common among the Ancients. They even considered this Qualification as indispensable in a Commander in chief. The Emperors piqued themselves on it, and whenever they harangued the Army, took Care to perpetuate the Memory thereof by striking Medals on the Occasion. We meet with them frequently with the Word Adlocutio on the Reverse, the proper Term for these military Harangues,

Advantages

Advantages they may have obtained over them. He should employ every Argument capable of exciting Rage, Hatred, and Indignation against the Adversaries in the Minds of his Soldiers. It is natural for Men in general to be affected with some Sensations of Fear at the Beginning of an Engagement; but there are, without Doubt, some of a more timorous Disposition, who are disordered by the very Sight of the Enemy. To diminish these Apprehensions, before you venture on Action, draw up your Army frequently in Order of Battle in some safe Situation, whence your Men may be accustomed to the Sight and Appearance of the Enemy: when Opportunity offers, they should be sent to fall upon them, and endeavor to put them to Flight, or kill some of their Men: thus they will become acquainted with their Customs, Arms, and Horses: and Objects with which we are once familiarised are no longer capable of giving us Terror.

XIII. Choice
of the Field
of Battle.

Good Generals are sensible that Victory depends much on the Nature of the Field of Battle. When you intend therefore to engage, endeavor to draw the chief Advantage from your Situation, and the highest Ground is reckoned the best. Weapons thrown from a Height strike with greater Force; and the Party above their Antagonists can repulse and bear them down
with

with greater Impetuosity ; while they who struggle with the Ascent, have both the Ground and the Enemy to contend with. There is, however, this Difference with Regard to Place : if you depend on your Foot against the Enemy's Horse, you must chuse a rough, unequal, and mountainous Situation ; but if, on the contrary, you expect your Cavalry to act with Advantage against the Enemy's Infantry, your Ground must indeed be higher, but plain and open, without any Obstructions of Woods or Morasses.

In drawing up an Army in Order of Battle, ^{XIV. Order of Battle.} three Things are to be considered, the Sun, the Dust, and the Wind. The Sun in your Face dazzles the Sight ; if the Wind is against you, it turns aside and blunts the Force of your Weapons, while it assists those of your Adversary ; and the Dust driving in your Front, fills the Eyes of your Men and blinds them. Even the most unskilful endeavor to avoid these Inconveniences in the Moment of making their Disposition ; but a prudent General should extend his Views beyond the present ; he should take such Measures as not to be incommoded in the Course of the Day by the different Aspect of the Sun, or by contrary Winds, which often rise at a certain Hour*, and might be detrimen-

* Contrary Winds, which often rise at a certain Hour.]
At the Battle of Cannæ, Hannibal took the Advantage of

tal during the Action. Our Troops should be so disposed as to have these Inconveniences behind them, while they are directly in the Enemy's Front. An Army drawn up to engage is said to be in Order of Battle: the Part which faces the Enemy is called the Front. A Disposition if judicious, is of the greatest Advantage in a general Engagement; but if bad, the best Troops in the World can never make Amends for its Defects. The Rule in drawing up an Army is to place experienced and veteran Soldiers, formerly called Principes, in the first Line. In the second Line, are posted a select Body of Infantry armed with Cuirasses, Javelins, or Pikes; and these were formerly called Hastati. The Space of three Feet in Front is generally allowed each Soldier; so that a Rank of one thousand six hundred and sixty six Men occupies the Extent of one thousand Paces: thus their Order is not too open, and they have sufficient Room to handle their Arms. The Distance between each Rank should be six Feet, to allow the Soldiers Ground to advance and retire; which is requisite for throwing Weapons with greater Force.

a violent South-East Wind, called by the Inhabitants of the Country Vulturus, which generally rose at a stated Hour. It incommoded the Romans excessively during the Action, by driving Clouds of Dust, from that flat and sandy Country, directly in their Faces, and contributed not a little to their Defeat. See Florus and Livy.

These

These two Lines are composed of Soldiers of a proper Age, experienced, and heavy-armed: immoveable like a Wall, they must never quit their Ground, not even for Pursuit, lest they should break their Order; but are to receive the Enemy's Charge with Firmness, and to engage and repulse them without stirring out of their Ranks. In the Rear of these is posted a third Body of the most active Soldiers, young Archers, and such as are expert in the Use of the Javelin, formerly called *Ferentarii*. A fourth is composed of Infantry armed with light Shields, of the youngest Archers, and of those who fight with the small Javelin*, or with the *Martiobarbuli*†: these had formerly the Appellation of light armed Foot. It is proper to take Notice, that while the two first Lines continue drawn up on their proper Ground, the third and fourth Bodies advance into the Front to attack and annoy the Enemy with their Darts and Arrows: if they can put them to Flight, they pursue them in Conjunction with the Cavalry; but if repulsed themselves, they fall back upon the first and second Lines, and retire thro' the Intervals to their proper Posts: and these two Lines, when close enough to use their Piles and Swords, suf-

* Small Javelin.] Orig. *Verutum*. See Book II, Sect. 15, where this Weapon is described.

† *Martiobarbuli*.] The Original adds, *Quas Plumbatas nominant*.

tain the whole Weight of the Action. There was sometimes a fifth Corps made up of the Soldiers who served the Carrobalistæ and Manubalistæ, and who used the Fustibalus and common Sling*. The Fustibalus is a Staff four Feet long, to the middle of which is fastened a leathern Sling: it is used with both Hands, and throws the Stones almost in the same Manner as the Onager. The common Sling is made of Hemp, or of the Hairs or Bristles of Animals, which are reckoned best for this Use; and casts the Stone with a Turn of the Arm about the Head. The young Soldiers called Accensi or Supernumeraries, who had no Shields, but fought with Darts or Stones thrown by Hand, were comprehended in this Corps. In the Rear of all was a sixth Body, composed of the best Soldiers in the Army, completely armed in every Respect, and with Shields of a large Size: these were called by the Ancients Triarii. They rested on their Arms during the Action, that they might be fresh and vigorous when brought up to the Charge; for if the first Lines were roughly handled, all Hopes of Recovery depended entirely on their Bravery and Resolution.

* Fustibalus and common Sling.] Orig. In quinta Acie ponebantur interdum Carrobalistarii, Manubalistarii, Fustibulatores, Funditores. Fustibulatores sunt qui Fustibalis Lapides jaciunt. Fustibalus Fustis est, &c. I have shortened this a little in the Translation.

Having explained the general Disposition of the Lines, we now come to the Distances and Dimensions. One thousand Paces * contain a single Rank of one thousand six hundred and sixty six Foot Soldiers, each Man being allowed three Feet. Six Ranks drawn up on the same Extent of Ground will require nine thousand nine hundred and ninety six Men: to form only three Ranks of the same Number, will take up two thousand Paces: but it is much better to increase the Number of Ranks than to make your Front too extensive. We have before ob-

XV. Proper Distances and Intervals.

* One thousand Paces.] In this Calculation Vegetius computes only the Intervals between the Files, without accounting for the Ground the Men are to stand on. An Interval is the Distance of Ground between File and File, and Rank and Rank, and no Part of the Ground on which the Files or Ranks stand. He says himself in this and the preceding Sections, the Distance between each File was three Feet. One thousand six hundred sixty-six Files have one thousand six hundred sixty-five Distances, which, multiplied by three, produce four thousand nine hundred ninety-five, which want but five Feet of one thousand Paces. He says farther in this Section, that each Man took up one Foot: one thousand six hundred sixty-six Men must therefore have had one thousand six hundred sixty-six Feet to stand on, which, added to four thousand nine hundred ninety-five, make the whole Extent of Ground in Front six thousand six hundred sixty-one Feet, one third more than Vegetius allows. Polybius, B. XII, speaking of the Macedonian Phalanx, seems to have fallen into the same Inadvertency.

served

served the Distance between each Rank should be six Feet, one Foot of which is taken up by the Men: thus if you form a Body of ten thousand Men into six Ranks, they will occupy thirty six Feet in Depth*, and a thousand Paces in Front. By this Calculation, it is easy to compute the Extent of Ground requisite for twenty or thirty thousand Men to form upon: nor can a General be mistaken, when thus he knows the Proportion of Ground for any fixed Number of Men. But if the Field of Battle is not spacious enough, or your Troops are very numerous, you may form them into nine Ranks, or even more: for it is more advantageous to engage in close Order, than to extend your Line too much. An Army that takes up too much Ground in Front, and too little in Depth, is quickly penetrated by the Enemy's first Onset: after which there is no Remedy. As to the Posts of the different Corps in the right or left Wing or in the Center, it is the general Rule to draw them up according to their respective Ranks, or to distribute them as Circumstances or the Dispositions of the Enemy may require.

* Thirty-six Feet in Depth.] Orig. *Quadráginta duos*. The Calculation itself shews this to be a Mistake. Six Ranks, at six Feet Distance from one another, make the Intervals but thirty Feet; to which we must add six Feet more, reckoning one Foot for the Ground taken up by each Rank in particular.

The

The Line of Infantry being formed, the Cavalry are drawn up in the Wings: the heavy Horse, that is, the Cuirassiers and Troopers armed with Lances, should join the Infantry, for the light Cavalry, consisting of the Archers and those who have no Cuirasses, should be placed at a greater Distance: the best and heaviest Horse are to cover the Flanks of the Foot, and the light Horse are posted as abovementioned to surround and disorder the Enemy's Wings. A General should know what Part of his own Cavalry is most proper to oppose any particular Squadrons or Troops* of the Enemy: for from some Causes not to be accounted for, some particular Corps fight better against others, and those who have defeated superior Enemies, are often overcome by an inferior Force. If your Cavalry is not equal to the Enemy's, it is proper, after the ancient Custom, to intermingle it with light Infantry armed with small Shields and trained to this Kind of Service: they were formerly called Velites†. By observing this Method, tho'

* Squadrons or Troops.] Orig. Grumos, hoc est, Globos Hostium. Struwechius reads it Drungos. Drungus was a military Term in the latter Ages of the Empire. It occurs again in the 19th Section.

† Velites.] See Cæsar, Bell. Gall. I, 48. The Velites seem to have served sometimes on Horseback. See Sect. 24th of this Book. I shall here insert a Passage from Valerius

tho' the Flower of the Enemy's Cavalry should attack you, they will never be able to cope with this mixed Disposition. This was the only Resource of the old Generals to supply the Defects of their Cavalry; and they intermingled the Men, used to running, and armed for this Purpose with light Shields, Swords, and Darts, among the Horse, placing one of them between two Troopers.

XVII. Re-
serve.

The Method of having Bodies of Reserve in the Rear of the Army, composed of choice Infantry and Cavalry, commanded by the supernumerary Lieutenant Generals*, Counts, and Tribunes, is very judicious, and of great Consequence towards the Gain of a Battle. Some

lerius Maximus, B. II, 3, as it gives a good Account of these Troops. *Velitum Usus eo Bello primum repertus est, quo Capuam Fulvius Flaccus Imperator obsedit: nam cum Equitatu Campanorum crebris Excursionibus Equites nostri, quia Numero pauciores erant, resistere non possent, Q. Nævius Centurio è Peditibus lectos expediti Corporis, brevibus & incurvis septenis armatos Hastis, parvo Tegmine munitos, veloci Saltu jungere se Equitibus, & rursus celeri Motu dilabi instituit; quo facilius equestri Prælio subiecti Pedites, Viros pariter atque Equos Hostium Telis incesferent.* This Fulvius Flaccus was Collegue to the Consul Appius Claudius, mentioned 'by our Author, Book I, 15, to which Passage this Note may also be referred.

* Supernumerary.] Orig. Vacantibus; not employed in the Line.

should

should be posted in the Rear of the Wings, and some near the Center, to be ready to fly immediately to the Assistance of any Part of the Line which is hard pressed, to prevent its being pierced, to supply the Vacancies made therein during the Action, and thereby keep up the Courage of their Fellow-Soldiers, and check the Impetuosity of the Enemy. This was an Invention of the Lacedæmonians, in which they were imitated by the Carthaginians; and the Romans have since every where observed it: and indeed no better Disposition can be found. The Line is solely designed to repulse, or if possible, break the Enemy: if it is necessary to form the Wedge* or the Tenaille†, it must be done by the supernumerary Troops stationed in the Rear for that Purpose. If the Saw‡ is to be formed, it must also be done from the Reserves: for if once you begin to draw off Men from the Line, you throw all into Confusion. If any flying Platoon§ of the Enemy should fall upon your Wing or any other Part of your Army, and you have no supernumerary Troops to oppose it, if you pretend to detach either Horse or Foot

* Wedge.] Orig. Cuneus. See Sect. 19.

† Tenaille.] Orig. Forfex. See Sect. 19.

‡ Saw.] Orig. Serra. See Sect. 19.

§ Flying Platoon.] Orig. Globus separatus.

from your Line on that Service, by endeavoring to protect one Part, you will expose the other to greater Danger. In Armies not very numerous, it is much best to contract the Front, and to have strong Reserves. In short, you must have a Reserve of good and well-armed Infantry near the Center, to form the Wedge, and thereby pierce the Enemy's Line; and also Bodies of Cavalry armed with Lances and Cuirasses, with light Infantry, near the Wings, to surround the Flanks of the Enemy.

XVIII. Post of the General, and of the second and third in Command.

The Post of the Commander in chief is generally on the Right between the Cavalry and Infantry: for from hence he can best direct the Motions of the whole Army, and remove with the greatest Ease wherever he finds it necessary. It is also the most convenient Spot to give his Orders to both Horse and Foot, and to animate them equally by his Presence. It is his Duty to surround the Enemy's left Wing opposed to him, with his Reserve of Horse and light Infantry, and attack it in Flank and Rear. The second in Command is posted in the Center of the Infantry, to encourage and support them. A Reserve of good and well-armed Infantry is near him and under his Orders, with which he either forms the Wedge to pierce the Enemy's Line, or if they form the Wedge first, prepares the Tenaille for its Reception. The Post of the third in Command

Command is on the left; he should be a careful and intrepid Officer, this Part of the Army being difficult to manage, and defective, as it were, from its Situation in the Line. He should therefore have a Reserve of good Cavalry and active Infantry, to enable him always to extend his Left in such a Manner as to prevent its being surrounded. The War Shout* should not be begun till both Armies have joined; for it is a Mark of Ignorance or Cowardice to give it at a Distance: the Effect is much greater on the Enemy, when they find themselves struck at the same Instant with the Horror of the Noise and the Points of the Weapons. You must always endeavor to get the Start of your Enemy in drawing up in Order of Battle, as you will then have it in your Power to make your proper Dispositions without Obstruction: this will encrease the Courage of your own Troops, and intimidate your Adversaries. For a Superiority of Courage seems to be implied on the Side of an Army that offers Battle: while Troops begin to fear who see their Enemies ready to attack them. You will also

* War-Shout.] Orig. Clamor quem Barritum vocant. Barritus was properly the Noise of the Elephant, called in the Sabine Language Barrus. But Ammianus says it was a barbarous Appellation, and thus describes it: Clamor ipso Fervore Certaminum a tenui Susurro exoritur, paulatimque adolefcens, Ritu extollitur Fluctuum Cautibus illiforum, B. XVI.

secure another great Advantage, that of marching up in Order, and falling upon them while forming and still in Confusion. For Part of the Victory consists in throwing the Enemy into Disorder before you engage them.

XIX. *Manœuvres in Action.*

* An able General never loses a favorable Opportunity of surprising the Enemy either when tired on the March, divided in the Passage of a River, embarrassed in Morasses, struggling with the Declivities of Mountains, when dispersed over the Country they think themselves in Security, or are sleeping in their Quarters; in all these Cases, the Enemy are surprised and destroyed before they have Time to put themselves on their Guard: but if they are too cautious to give you an Opportunity of surprising or ensnaring them, you are then obliged to engage openly and on equal Terms. This at present is foreign to the Subject; however, military Skill is no less necessary in general Actions, than in carrying on War by Subtilty and Stratagem. Your first Care is to secure your left Wing from being surrounded by the Enemy's Numbers, or attacked in Flank or Rear by flying Platoons†, a Misfortune which often happens; nor is your

* The Original, in the first Sentences of this Section, is very much corrupted.

† Flying Platoons.] Orig. *Vagantibus Globis, quos vocant Drungos.*

Right

Right to be neglected, tho' less frequently in Danger. There is only one Remedy for this, to wheel back your Wing, and throw it into a circular Position: by which Evolution, your Soldiers face the Enemy on the Quarter attacked, and defend the Rear of their Comrades: but your best Men should be posted on the Angles of the Flanks, as it is against them the Enemy make their principal Efforts. There is also a Method of resisting the Wedge, when formed by the Enemy. The Wedge is a Disposition of a Body of Infantry widening gradually towards the Base, and terminating in a Point towards the Front; it pierces the Enemy's Line, by a Multitude of Darts directed to one particular Place: the Soldiers call it the Swine's Head. To oppose this Disposition, they make Use of another called the Tenaille*, resembling the Letter V, composed

* Tenaille.] Orig. *Forfex*, a Pair of Shears, Pincers, Though I am not fond of using French Words, yet I could not forbear borrowing that of *Tenaille* from the Translation of our Author in that Language. The Term is already familiar to military Persons, by its frequent Use in Fortification: and this made me less scrupulous of introducing it here. *Stewechius*, in his Notes on the 17th Section, quotes a Fragment of *Cato de Re militari*; "five
" *forte Opus fit Cuneo, aut Globo, aut Forcipe, aut Tur-*
" *ribus, aut Serra, uti adoriare;*" and imagines that *Cur-*
" *ribus*, which he interprets the Chariots armed with Scithes,
should be substituted instead of *Turribus*, which he thinks
can have no Meaning here; but we find the *Turris* was a
military

posed of a Body of chosen Men in close Order; it receives the Wedge, inclosing it on both Sides, and thereby prevents it from penetrating the Line. The Saw * is another Disposition formed of resolute Soldiers drawn up in a strait Line, advanced into the Front against the Enemy, to repair any Disorder. The Platoon† is a Body of Men, separated from the Line, to hover on every Side, and attack the Enemy wherever they find Opportunity: and against this is to be detached a stronger or more numerous Platoon. Above all, a General must never attempt to alter his Disposition, or break his Order of

military Disposition, as well as the others mentioned in the same Quotation: it was an oblong Square, like a Tower, with the small End towards the Enemy. The Greeks called it Πόργος, and Homer speaks of it, *Iliad*, μ. v. 43.

* Οὐ δὲ τε πυργόειον σφίλας αὐτὸς ἀπρίαντες.

* Saw.] Orig. Serra. It is not easy to conceive the Resemblance from which this Disposition had its Name. Some find a Similitude between it and the Teeth of a Saw, by its alternate Motion in advancing and retiring. In the old English Translation mentioned in the Preface, this Passage is as follows: "Also Serra, is called a Companye which being appointed of the stoutest and valiant Souldiours fighteth in Battaille, sometime marchinge forward, sometime recoylinge as a Sawe goeth when it is drawn, and is placed before the Forefront directly against their Ennemyes, that the Forehattell disordered may be brought into Araye againe."

† Platoon.] Orig. Globus.

Battle

Battle during the Time of Action: for such an Alteration would immediately occasion Disorder and Confusion, which the Enemy would not fail to improve to their own Advantage.

An Army may be drawn up for a general Engagement in seven different Dispositions. xx. Various Dispositions for engaging. The first Disposition is an oblong Square of a large Front, of general Use both in ancient and modern Times, altho' not thought the best by Judges of the Service, because an even and level Plain of an Extent sufficient to contain its Front cannot always be found, and if there should be any Irregularity or Hollow in the Line, it is often pierced in that Part: besides, an Enemy superior in Number may surround either your right or left Wing, the Consequence of which will be dangerous, unless you have a Reserve ready to advance and sustain his Attack. A General should make Use of this Disposition only when his Forces are better and more numerous than the Enemy's, it being thereby in his Power to attack both the Flanks, and surround them, on every Side. The second and best Disposition is the oblique: for tho' your Army consists of few Troops, yet good and advantageously posted, it will greatly contribute to your obtaining the Victory, notwithstanding the Numbers and Bravery of the Enemy. It is as follows. As the Armies are marching up to the Attack,

your

your left Wing must be kept back at such a Distance from the Enemy's Right, as to be out of Reach of their Darts and Arrows. Your right Wing must advance obliquely upon the Enemy's Left, and begin the Engagement; and you must endeavor, with your best Cavalry and Infantry, to surround the Wing with which you are engaged, make it give Way, and fall upon the Enemy in the Rear. If they once give Ground, and the Attack is properly seconded, you will undoubtedly gain the Victory, while your left Wing, which continued at a Distance, will remain untouched. An Army drawn up in this Manner bears some Resemblance to the Letter A, or a Mason's Level*. If the Enemy should be beforehand with you in this Evolution, Recourse must be had to the supernumerary Horse and Foot posted as a Reserve in the Rear, as I mentioned before, and they must be ordered to the Support of your left Wing: this will enable you to make a vigorous Resistance against the Artifice of the Enemy. The third Disposition is like the second; but not so good, as it obliges you to begin the Attack with your left Wing on the Enemy's Right: for the Efforts of the Sol-

* The Letter A, or a Mason's Level.] Orig. *Ad Similitudinem A Literæ, vel Libellæ fabrilis*. The French Translator has taken Pains to explain this Resemblance; but a large Fancy seems requisite to comprehend it.

diers on the Left are weak and imperfect, from their exposed and defective Situation in the Line. To explain this Disposition more clearly: tho' your left Wing should be much better than your right, yet it must be reinforced with some of the best Horse and Foot, and ordered to commence the Action with the Enemy's Right, to disorder and surround it as expeditiously as possible; and the other Part of your Army, composed of the worst Troops, must remain at such a Distance from the Enemy's Left, as not to be annoyed by their Darts, or in Danger of being attacked Sword in Hand. In this oblique Disposition, Care must be taken to prevent the Line being penetrated by the Wedges of the Enemy; and it is to be employed only when the Enemy's right Wing is weak, and your greatest Strength is on your Left. The fourth Disposition is this: as your Army is marching to the Attack in Order of Battle, and you are come within four or five hundred Paces of the Enemy, both your Wings must be ordered unexpectedly to quicken their Pace, and advance with Celerity upon them: when they find themselves attacked on both Wings at the same Time, the sudden Surprise may so disconcert them, as to give you an easy Victory. But tho' this Method, if your Troops are very resolute and expert, may ruin the Enemy at once, yet it is hazardous, the General who attempts it being obliged to abandon and expose

his Center, and to divide his Army into three Parts*; so that if the Enemy are not routed at the first Charge, they have a fair Opportunity of attacking the Wings separated from each other, and the Center destitute of Assistance. The fifth Disposition resembles the fourth; but with this Addition, the light Infantry and Archers are formed before the Center, to cover it from the Attempts of the Enemy. With this Precaution, the General may safely follow the abovementioned Method, and attack the Enemy's Left Wing with his Right, and their Right with his Left. If he puts them to Flight, he gains an immediate Victory, and if he fails of Success, his Center is in no Danger, being protected by the light Infantry and Archers. The sixth Disposition is very good, and almost like the second; it is used when the General cannot depend either on the Number or Courage of his Troops; and if made with Judgment, notwithstanding his Inferiority, he has often a good Chance for Victory. As your Line approaches the Enemy, advance your right Wing against their Left, and begin the Attack with your best Cavalry and Infantry; at the same Time keep the rest of the Army at a great Distance from the Enemy's Right, ex-

* Three Parts.] Orig. In duas Partes, which must be a Fault, as the two Wings and the Center certainly make three Divisions.

tended in a direct Line like a Javelin*. Thus, if you can surround their Left, and attack it in Flank and Rear, you must inevitably defeat them. It is impossible† for the Enemy to draw off Reinforcements from their Right or from their Center to sustain their Left in this Emergency, as the remaining Part of your Army is extended and at a great Distance from them, in the Form of the Letter L. It is a Disposition often used in an Action on a March. The seventh Disposition owes its Advantages to the Nature of the Ground, and will enable you also to oppose an Enemy, with an Army inferior both in Num-

* Like a Javelin.] Orig. In directum porrige, quasi Veru. The French adds, by Way of Explanation, "Comme un Javelot qui se presente de Pointe." The Center and Left, by this Disposition, were formed in a Line to the Rear, perpendicular to, or in a right Angle with, the Front.

† It is impossible.] The Original here is so obscure, that it is not easy to draw this Consequence from what goes before. The Author's Meaning, however, seems to be, that the Remainder of your Army, tho' disposed as above-mentioned, and at a Distance from the Enemy, will nevertheless be a sufficient Check upon them to prevent their sending off any Reinforcements from the Right or Center to sustain their Left, as the least Motion with such Intent would inevitably occasion Disorder, and your Left and Center might instantly wheel up, and take Advantage of the Change of Disposition. Such an Attempt must always be dangerous, as contrary to the excellent Maxim laid down by Vegetius at the End of the last Section.

ber and Goodness, provided one of your Flanks can be covered either with an Eminence, the Sea, a River, a Lake, a City, a Morass, or broken Ground inaccessible to the Enemy. The rest of the Army must be formed, as usual, in a strait Line, and the Flank, not secured, must be protected by your light Troops and all your Cavalry. Sufficiently defended on one Side by the Nature of the Ground, and on the other by a double Support of Cavalry, you may then safely venture on Action. One excellent and general Rule must be observed, that if you intend to engage with your Right Wing only, it must be composed of your best Troops; and the same Method must be taken with respect to the Left; or if you design to penetrate the Enemy's Line, the Wedges, which you form for that Purpose before your Center, must consist of the best disciplined Soldiers. Victory in general is gained by a small Number of Men: the Wisdom therefore of a General appears in nothing more than in such Choice and Disposition of his Men as is most consonant to Reason and Service.

XXI. The
Flight of an
Enemy not to
be prevented,
but fa-
cilitated.

Generals unskilled in War think a Victory incomplete, unless the Enemy are so straitened in their Ground, or so entirely surrounded by Numbers, as to have no Possibility of Escape. But in such Situations, where no Hopes remain, Fear itself will arm an Enemy, and Despair inspires

spires Courage: when Men find they must inevitably perish, they willingly resolve to die with their Comrades, and with their Arms in their Hands. The Maxim of Scipio*, that a Golden Bridge should be made for a flying Enemy, has been much commended. For when they have free Room to escape, they think of nothing but how to save themselves by Flight; and the Confusion becoming general, great Numbers are cut to pieces. The Pursuers can be in no Danger, when the vanquished have thrown away their Arms for greater Expedition: in this Case, the greater the flying Army, the greater the Slaughter. Numbers are of no Signification, where Troops once thrown into Consternation are equally terrified at the Sight of the Enemy as at their Weapons. But on the contrary, Men when shut up, tho' weak and few in Number, become a Match for the Enemy, from this very Reflection, that they have no Resource but in Despair.

The Conquer'd's Safety is, to hope for none †.

* The Maxim of Scipio.] The Romans, when a Place was to be stormed, surrounded it entirely with their Troops, which they called *cingere Urbem Corona*: but the ancient Jews, in Conformity to this Maxim, left a Part free and uninvested, and all who came out by that Passage and submitted were pardoned.

† Virgil, *Æneid* II, 354. Lauderdale's Translation.

Having

XXII. Man-
ner of con-
ducting a
Retreat.

Having gone thro' the various Particulars relative to general Actions, it remains at present to explain the Manner of retreating in Presence of the Enemy, which, in the Judgment of Men of the greatest Skill and Experience, is attended with the utmost Hazard. A General certainly discourages his own Troops, and animates his Enemies, by retiring out of the Field without fighting; yet as this must sometimes necessarily happen, it will be proper to consider how to perform it with Safety. In the first Place, your Men must not imagine you retire to decline an Action, but believe your Retreat an Artifice to draw the Enemy into an Ambuscade or more advantageous Situation, where you may easier defeat them, in Case they follow you: for Troops, who perceive their General despairs of Success, are prone to Flight. You must be cautious lest the Enemy should discover your Retreat, and fall immediately upon you. To avoid which Danger, the Cavalry are generally posted in the Front of the Infantry, to conceal their Motions and Retreat from the Enemy. The first Divisions are drawn off first, the others following in their Turns; the last maintain their Ground till the rest are marched off, and then file off themselves and join them in a leisurely and regular Succession. Some Generals have judged it best to make their Retreat in the Night, after reconnoitring their Routes, and thus gained so much Ground,

Ground, that the Enemy, not discovering their Departure till Day-break, were not able to come up with them. The light Infantry was also sent forward to possess the Eminences, under which the Army might instantly retire with Safety; and the Enemy, in Case they pursued, be exposed to the light Infantry, Masters of the Heights, seconded by the Cavalry. A rash and inconsiderate Pursuit exposes an Army to the greatest Danger possible, that of falling into Ambuscades and the Hands of Troops ready for their Reception. For as the Temerity of an Army is increased and their Caution lessened by the Pursuit of a flying Enemy, this is the most favorable Opportunity for such Snares: and the greater the Security, the greater the Danger. Troops, when unprepared, at their Meals, fatigued after a March, when their Horses are feeding, and in short, when they believe themselves most secure, are generally most liable to a Surprise. All Risques of this Sort are to be carefully avoided, and all Opportunities taken of distressing the Enemy by such Methods. Neither Numbers nor Courage avail in Misfortunes of this Nature. A General, if defeated in a pitched Battle, tho' Skill and Conduct have the greatest Share in the Decision, may in his Defence throw the Blame on Fortune; but if he has suffered himself to be surprised or drawn into the Snares of his Enemy, he has no Excuse for his Fault: because he might have avoided

avoided such a Misfortune by taking proper Precautions, and employing Spies on whose Intelligence he could depend. When the Enemy put themselves on the Retreat, the following Snare is usually laid. A small Body of Cavalry is ordered to pursue them the direct Road; at the same Time a strong Detachment is secretly sent another Way to conceal itself on their Route. When the Cavalry have overtaken the Enemy, they make some feint Attacks, and retire. The Enemy, imagining the Danger past, and that they have escaped the Snare, neglect their Order, and march without Regularity, when the Detachment privately sent to intercept them, seizing the Opportunity, falls upon them unexpectedly, and destroys them with Ease. Many Generals, when obliged to retreat thro' Woods, send forward Parties to possess the Defiles and difficult Passes, to avoid Ambuscades; and stop up the Roads with Barricades of felled Trees*, to secure themselves from being pursued and attacked in the Rear. In short, both Sides have equal Opportunities of surprising or laying Ambuscades on the March. The Army which retreats, leaves Troops behind for that Purpose, posted in convenient Vallies, or Mountains covered with

* Barricades of felled Trees.] Orig. *Præcis Arboribus Vias claudunt, quas Compedes vocant.* The true Reading is *Concedes*: See Tacitus, Annal. I, 50; and Ammianus Marcellinus, B. XVI, XVII.

Wood, and if the Enemy falls into the Snare, returns immediately to their Assistance. The Army that pursues, detaches different Parties of light Troops to march before thro' By-Roads and intercept the Enemy, who are thus surrounded and attacked at once in Front and Rear. The flying Army may return and fall on the Enemy while asleep in the Night; and the pursuing Army may, tho' the Distance is great, surprise the Adversary by forced Marches. The former endeavor, at the Passage of a River, to destroy such Part of the Enemy's Army as have already passed, while separated from the rest by the Channel of the River; and the Pursuers hasten their March to fall upon those Bodies of the Enemy that have not yet crossed.

Certain People of Africa * retain to this Day XXIII. Camels and Cavalry called Cataphraſti. a Custom, formerly used by various Nations, of bringing Camels into the Field. These Animals, formed by Nature for a sandy Soil and to endure Thirst, are said to be sure Guides thro' Deserts when the Tracks and Roads are buried in Dust by the Violence of the Winds: but excepting their Novelty, which at first may have some Effect, they are useless in War. The Troopers

* Certain People of Africa.] Orig. Urfiliani in Africa, Macetesque. The Names of these People differ in every Manuscript, and are entirely unknown.

called Cataphraſti* are indeed ſecured from Wounds by their complete Armor, but are rendered ſo unwieldy by its Weight and Incumbrance, that they become an eaſy Prey to the Infantry, who attack them without Order, and with whom they are oftener engaged than with Cavalry. However, they are of moſt Service in Action, when poſted in the Front of the Legions, or mingled with the Legionary Soldiers; and often pierce the Enemy's Line, when the Armies come to cloſe Engagement.

XXIV.
Armed Chariots, and
Elephants.

The armed Chariots† uſed in War by Antiochus and Mithridates, at firſt terrified the

* Troopers called Cataphraſti.] Orig. Cataphraſti Equites. This Sort of Cavalry, as well as their Horſes, were entirely covered with Armor. The Word is derived from *καταφράσσω*, vel *καταφράττω*, munio. Ammianus, in his fixteenth Book, tells us the Perſians called them Clibanarii, and deſcribes them minutely; and explains our Author ſo well in another Paſſage in the ſame Book, that I ſhall inſert it. “Norant enim licet prudentem ex Equo Bellatorem cum Clibanario noſtro congreſſum, Fræna retinentem & Scutum, Haſta una Manu vibrata, Tegminibus ferreis abſcondito Bellatori nocere non poſſe: Peditem vero inter ipſos Discriminum Vertices, cum nihil caveri ſolet, præter id quod occurrit, humi occultè reptantem, Latere forato Jumentum incautum Rectorem præcipitem agere, levi Negotio trucidandum.” See Nazarius's Panegyric on Conſtantine the Great.

† Armed Chariot.] Orig. Quadrigæ ſalcatæ: Chariots armed with Scithers. The Number of Horſes to theſe Chariots

riots

Romans, but they afterwards made a Jest of them. As a Chariot of this Sort does not always meet with plain and level Ground, the least Obstruction stops it; and if one of the Horses be either killed or wounded, it falls into the Enemy's Hands. The Roman Soldiers rendered them useless chiefly by the following Contrivance: at the Instant the Engagement began, they strowed the Field of Battle with Caltrops; and the Horses that drew the Chariots running full Speed on them, were infallibly destroyed. A Caltrop is a Machine composed of four Spikes or Points, that in whatever Manner thrown on the Ground, it rests on three, and presents the fourth always upright. Elephants, by their vast Size, horrible Noise, and Novelty of their Form, are at first very terrible both to Men and Horses. Pyrrhus first employed them against the Romans in Lucania; and afterwards Hannibal brought them into the Field in Africa. Antiochus in the East, and Jugurtha in Numidia had great Numbers. Many Expedients have been used against them: in Lucania, a Centurion cut off the Trunk of one with his Sword: two Soldiers armed from Head to Foot* in a Chariot

riots was not always the same: but Quadrigæ here means Chariots in general.

* Soldiers armed from Head to Foot.] Orig. Clibanarii. Ammianus, Lib. XVI, informs us this was a Persian Word, signifying the same as Cataphrasti.

drawn by two Horses also covered with Armor*, attacked these Beasts with Lances of a great Length†: they were secured by their Arms from the Archers on the Elephants, and avoided the Fury of the Animals by the Swiftneſs of their Horses. Foot-Soldiers completely armed, with the Addition of long Iron Spikes fixed on their Arms, Shoulders, and Helmets, to prevent the Elephant from ſeizing them with his Trunk, were alſo employed againſt them. But among the Ancients, the Velites uſually engaged them: they were young Soldiers, light-armed, active, and very expert in throwing their miſſive Weapons on Horſeback. Theſe Troops kept hovering round the Elephants continually, and killed them with large Lances and Javelins. Afterwards, the Soldiers, as their Apprehenſions decreased, attacked them in a Body, and throwing their Javelins together, deſtroyed them by the Multitude of Wounds. Slingers, with round Stones from the Fuſtibalus and Sling, killed both the Men who guided the Elephants, and the Soldiers who fought in the Towers on their

* Horses covered with Armor.] Orig. Equi Cataphraſti.

† Lances of a great Length.] Orig. Sariffas, hoc eſt, longiſſimos Contos. The Sariffa was the principal Weapon of the famous Macedonian Phalanx, and, according to Ælian, one and twenty Feet long.

Backs: and this was found by Experience the best and safest Expedient. Besides, on the Approach of these Beasts, the Soldiers opened their Ranks and let them pass thro'; and when they got into the Midst of the Troops, surrounding them on all Sides, they took them and their Guides unhurt. Large Balistæ, drawn on Carriages by two Horses or Mules, should be placed in the Rear of the Line, that when the Elephants come within Reach, they may be transfix'd with the Darts. The Balistæ should be larger, and the Heads of the Darts stronger and broader, than usual, that the Darts may be thrown farther, with greater Force, and the Wounds be proportioned to the Bodies of the Beasts. It was proper to describe these several Methods and Contrivances employed against Elephants, that it may be known on Occasion in what Manner to oppose those prodigious Animals.

If, while one Part of your Army is victorious, the other should be defeated, you are by no Means to despair, since even in this Extremity, the Constancy and Resolution of a General may recover a complete Victory. There are innumerable Instances, where the Party that gave least Way to Despair was esteemed Conqueror. For where Losses and Advantages seem nearly equal, he is reputed to have the Superiority who bears up against his Misfortunes with greatest Resolution.

XXV. Resources in Case of a Defeat.

tion. He is therefore to be first, if possible, to seize the Spoils of the Slain, or, in the military Phrase, plunder the Field*, and to make Rejoicings for the Victory. Such Marks of Confidence dispirit the Enemy, and redouble your own Courage, as if your Troops had been every where successful. Yet notwithstanding an entire Defeat, as many Generals have been fortunate enough to repair such a Loss, all possible Remedies must be attempted. A prudent Officer will never risque a general Action without taking such Precautions as will secure him from any considerable Loss in Case of a Defeat, which the Uncertainty of War and the Nature of Things render sometimes unavoidable. The Neighborhood of a Mountain, a fortified Post in the Rear, or a resolute Stand made by a good Body of Troops, to cover the Retreat, may be the Means of saving the Army. An Army, after a Defeat, has sometimes rallied, returned on the Enemy dispersed and pursuing in Disorder, and destroyed them without Difficulty. Nor can Men be in a more dangerous Situation than when, in the midst of Joy after Victory, their Exultation is suddenly converted into Terror. Whatever be the Event, the Remains of the Army must be immediately assembled, reanimated by suitable

* Plunder the Field.] Orig. Quod ipsi dicunt, colligat Campum.

Exhortations, and furnished with fresh Supplies of Arms; new Levies immediately made, and new Reinforcements provided: and which is of much the greatest Consequence, proper Opportunities taken to surprize the victorious Enemies, to draw them into Snares and Ambuscades, and by this Means to recover the drooping Spirits of your Men. Nor will it be difficult to meet with such Opportunities, as the Nature of the human Mind is apt to be too much elated, and to act with too little Caution in Prosperity. If any one should imagine no Resource is left after the Loss of a Battle, let him reflect on what has happened in similar Cases, and he will find, that they who were victorious in the End, were often unsuccessful in the Beginning.

It is the Nature of War, that what is bene- XXVI. General Max-
ims. ficial to you, is detrimental to your Enemy; and what is of Service to him always hurts you. It is therefore a Maxim never to do, or to omit doing, any Thing in Consequence of his Conduct, but to consult invariably your own Interest only; and you depart from this Interest, whenever you imitate such Measures as he pursues for his Benefit; as by the same Reason, it would be wrong in him to follow such Steps as you take for your Advantage.

The

The more your Troops have been accustomed to Camp-Duties on Frontier Stations*, and the more carefully they have been disciplined, the less Danger they will be exposed to in the Field.

Men must be sufficiently tried before they are led against the Enemy.

It is much better to overcome the Enemy by Famine, Surprise, or Terror, than by general Actions, wherein Fortune has often a greater Share than Valor.

Those Designs are best which the Enemy are entirely ignorant of till the Moment of Execution.

Opportunity in War is often more to be depended on than Courage,

To debauch the Enemy's Soldiers, and give them Encouragement, when sincere in surrendering themselves, is of singular Service; for an Adversary is more hurt by Desertion than by Slaughter.

It is better to have several Bodies of Reserve, than to extend your Front too much.

A General is not easily overcome who can form a true Judgment of his own and the Enemy's Forces.

* Camp-Duties on Frontier Stations.] Orig. Plus in Agrariis vigilaverit. See the Note, Book I, Sect. 3.

Valor is superior to Numbers.

The Nature of the Ground is often of more Consequence than Courage.

Few Men are born brave: many become so thro' Care and Force of Discipline.

An Army is strengthened by Labor, and enervated by Idleness.

Troops are not to be led to Battle, unless confident of Success.

Novelty and Surprise throw an Enemy into Consternation: but common Incidents have no Effect.

He who rashly pursues a flying Enemy with Troops in Disorder, seems inclined to resign that Victory which he had before obtained.

An Army, unsupplied with Corn and other necessary Provisions, will be vanquished without striking a Blow.

A General, whose Troops are superior both in Number and Bravery, should engage in the oblong Square; which is the first Disposition.

He who judges himself inferior, should advance his right Wing obliquely against the Enemy's Left: this is the second Disposition.

If your left Wing is strongest, you must attack the Enemy's Right; according to the third Disposition.

The General who can depend on the Discipline of his Men, should begin the Engagement by attacking both the Enemy's Wings at once: the fourth Disposition.

He whose light Infantry are good, should cover his Center by forming them in its Front, and charge both the Enemy's Wings at once: this is the fifth Disposition.

He who cannot depend either on the Number or Courage of his Troops, if obliged to engage, should begin the Action with his Right, and endeavor to break the Enemy's Left; the rest of his Army remaining formed in a Line perpendicular to the Front, and extended to the Rear like a Javelin: this is the sixth Disposition.

If your Forces are few and weak in Comparison of the Enemy, you must make Use of the seventh Disposition, and cover one of your Flanks either with an Eminence, a City, the Sea, a River, or some Protection of that Kind.

A General who trusts to his Cavalry, should chuse proper Ground for them, and employ them principally in the Action.

He who depends on his Infantry, should chuse a Situation most proper for them, and make most Use of their Service.

When an Enemy's Spy lurks in the Camp, order all your Soldiers in the Day-Time to their Tents, and he will instantly be apprehended.

On

On finding the Enemy has Notice of your Designs, you must immediately alter your Plan of Operations.

Consult with many on the proper Measures to be taken, but communicate the Designs you intend to put in Execution to few, and those only of the most assured Fidelity; or rather trust no one but yourself.

Punishment and the Fear thereof are necessary to keep Soldiers in Order in Quarters; but in the Field they are more influenced by Hope and Rewards.

Good Officers never engage in general Actions, unless induced by Opportunity, or obliged by Necessity.

To distress the Enemy more by Famine than the Sword, is a Mark of consummate Skill.

Many Instructions might be given with regard to the Cavalry; but as this Branch of the Service has been brought to Perfection since the ancient Writers, and considerable Improvements been made in their Exercises and Evolutions, their Arms, and the Quality and Management of their Horses, nothing can be collected from their Works: our present Mode of Discipline is sufficient.

Dispositions for Action must be carefully concealed from the Enemy, lest they should counteract

tract them, and defeat your Designs by proper Expedients.

This Abridgment of the most eminent military Writers, invincible Emperor, contains the Maxims and Instructions they have left us, approved by different Ages, and confirmed by repeated Experience. The Persians admire Your Skill in Archery; the Huns and Alans endeavor in vain to imitate Your Dexterity in Horsemanship; the Saracens and Indians cannot equal Your Activity in the Course; and even the Masters at Arms pique themselves on only Part of that Knowledge and Expertness of which You give so many Instances in their own Profession. How glorious* is it therefore for Your Majesty with all

* How glorious.] The Expressions in the Original seem to imply that nothing is wanting to complete the Character of Valentinian, but the Addition of the military Science to the abovementioned Exercises of the Body, in which he already excels. But this would be too bad a Compliment to that Emperor, especially after what our Author has said in the Prefaces of the first and second Books. In the former he tells him he does not presume to offer him these military Institutions for his Instruction, but to show him how closely he follows the Examples of the great Founders of the Roman Empire. In the latter, he attributes his continued Victories and Triumphs, which he says surpass Antiquity itself, to his perfect Knowledge of War. I have borrowed this Remark from the French Translator, and followed him in giving this Passage a different Turn, as it is expressed oddly in the Original.

these

these Qualifications to unite the Science of War and the Art of Conquest; and to convince the World, that by Your Conduct and Courage, You are equally capable of performing the Duties of the Soldier and of the General!

END OF BOOK III.

MILITARY INSTITUTIONS

O F

V E G E T I U S.

B O O K I V.

T O T H E

EMPEROR VALENTINIAN.

P R E F A C E.

IN the first Ages of the World Men lived a wild and savage Life, little different from the Brute Creation, till collected and formed into Societies by the Building of Cities; which Communities from their common Advantages received the Name of Republics. Wherefore the most powerful Nations, and sovereign Princes, have thought it their greatest Glory either to found new Cities, or to rebuild and beautify old ones, and call them after their own Names: and in this Your Majesty's

Majesty's Greatness shines in full Lustre. Other Princes have confined their Favors to few Cities, perhaps to only one; but such is Your Majesty's paternal Affection for Your Subjects, that the innumerable Cities rebuilt and adorned by Your continued Attention, seem rather the Work of Heaven than of Man. Your Felicity, Moderation, Purity of Manners, Clemency, and Love for the fine Arts, exalt You above all other Emperors. . . . Sensible of Your Virtues and the Happiness of Your Reign, we acknowledge ourselves in Possession of what has ever been the Object of the Wishes of past Ages, and what will be always regretted by Posterity. We therefore congratulate the World on the Enjoyment of the greatest Blessing that either Man could ask, or Providence confer. Rome, a City destined to be the Mistress of the World, was formerly saved from Destruction by its Citadel the Capitol: an evident Proof of the Importance of well constructed Fortifications, and of Your Majesty's Wisdom in attending to Works of this Kind. Wherefore to complete this Work begun by Your Majesty's Command, I shall in the following Book, from the different Writers on this Subject, digest the Methods used in the Attack and Defence of Places: nor shall I think much of my Labor, as it may be of Service to the Public.

B O O K IV.

SECTION. I. Natural and Artificial Fortification. II. The Walls of Cities. III. Ramparts. IV. Portcullis and Gates. V. Ditches. VI. Methods of covering the Garrison against the Weapons of the Besiegers. VII. Provisions necessary during a Siege. VIII. Military Stores. IX. Cords of the Engines. X. Precautions against Want of Water. XI. Methods of making Salt. XII. The first Assault. XIII. Machines for Attack. XIV. The Ram, Scithe, and Tortoise. XV. Vines, Mantlets, and Cavaliers. XVI. Musculi. XVII. Moving Towers. XVIII. How to burn the moving Towers. XIX. Manner of raising the Height of the Walls. XX. Method of undermining the moving Towers. XXI. The Scaling Ladders, Harp, Exostra, and Cranc. XXII. The Balistæ, Onagri, Scorpions, Arcubalistæ, Fustibali, and Slings, for Defence. XXIII. Mattresses, Ropes with running Knots, Wolves, and heavy Columns, against the Ram. XXIV. Mines. XXV. Resources after a Place is forced. XXVI. Guard of the Ramparts. XXVII. Stratagems of the Besiegers. XXVIII. Line of Countervallation. XXIX. Engines for Defence. XXX. Methods of taking the Height of the Walls.

CITIES and Castles are fortified either by SECT. I. Natural and Artificial Fortification. Nature, or Art, or which is still more complete, by both: by Nature, when situated on a high or steep Place, or surrounded by the

Sea, Marshes, or Rivers; by Art, when inclosed with Ramparts and Ditches. When a Place is to be built, the surest Way is to take every Advantage of Ground; for in a level and uniform Situation, nothing can be done but by mere Dint of Industry and Labor. We see, however, ancient Cities built in open Plains, which, notwithstanding the Disadvantage of Ground, have been rendered impregnable by Art and Labor."

II. The
Walls of
Cities,

The Ancients never built their Walls in strait Lines, that Disposition exposing them too much to the Violence of the Ram, but with salient and reentering Angles with Towers at the Extremities. If an Enemy attempts to fix scaling Ladders, or advance Machines to a Wall of this Construction, he is seen in Front, in Flank, and almost in Rear, and is in a Manner surrounded by the Defences of the Place.

III. Ram-
parts,

A Rampart, to have sufficient Strength and Solidity, should be thus constructed. Two parallel Walls are built at the Distance of twenty Feet from each other; and the Earth, taken out of the Ditches, thrown into the intermediate Space, and well rammed down. The inner Wall should be lower than the outer, to allow an easy and gradual Ascent from the Level of the City to the Top of the Rampart. A Ram cannot destroy a Wall thus supported by Earth, and

in

in Case the Stone-Work should by Accident be demolished, the Mass of Earth within would resist its Violence as effectually.

To secure the Gates of a City from Fire, they should be covered with raw Hides and Plates of Iron. But the ancient Invention is the best for this Purpose; it is a Work thrown up before the Gate, with a Portcullis* at the Entrance suspended by Iron Rings and Ropes: if the Enemy enter the Work, the Portcullis is let down, and they lie at the Mercy of the Besieged. The Wall above the Gate should also be perforated in several Places, that Water may be poured down to extinguish the Fire on Occasion.

The Ditches round a City should be very broad and deep, that the Besiegers may not easily fill them up, and that an effectual Stop may be put to the Mines by the Quantity of Water they contain. For the Depth of the Ditch and the Water are the two principal Obstructions to these Kinds of subterranean Works.

There is Reason to apprehend the Showers of Arrows may drive the Besieged from the Defences of the Place, whereby the Enemy gain an Opportunity of fixing their Ladders and mount-

VI. Methods of covering the Garrison against the Weapons of the Besiegers.

* Portcullis.] Orig. Cataraeta, from $\kappa\alpha\tau\alpha\lambda\acute{\alpha}\sigma\sigma\omega$ vel $\kappa\alpha\tau\alpha\lambda\acute{\alpha}\lambda\eta\omega$, cum Impetu decido.

ing the Ramparts: the greatest Part of the Garrison should therefore be provided with Cuirasses and Shields for Security against this Danger. They should also be covered with a Curtain of coarse Cloth or Hair, hung round the Ramparts, and forming a double Parapet: this breaks the Force of the Arrows, which do not easily pierce any fluctuating and yielding Body opposed to them. Another Expedient is, to fill Caissons of Wood, called Metellæ, with Stones, and range them so artfully between the Battlements, that as the Enemy mount by their scaling-Ladders, and approach any Part of the Parapet, they are overwhelmed by the Showers of Stones that fall on their Heads.

VII. Provisions necessary during a Siege.

We shall insert the several Methods of Attack and Defence in their proper Places, but shall here observe, that there are in general two Ways of attacking a Place; one, when the Besiegers endeavor to make themselves Masters of it by repeated Assaults, and by Storm; the other, when they cut off the Supplies of Water, and every Kind of Provision, in order to reduce it by Famine: by following the last Method they tire out the Besieged at Leisure, and without running any Risque. To provide against this Danger, on the least Suspicion of such Designs of the Enemy, the Provisions of every Kind must be carefully conveyed into the Place, that they
may

may have even more than sufficient themselves, and the Besiegers be forced to retire for Want of Subsistence. Hogs, and all other Animals that cannot be kept alive within the Place, are to be salted, that the Bread may hold out longer by the Distribution of the Flesh. All Sorts of Poultry may be kept without any great Expence, and are very necessary for the Use of the sick. Above all, a sufficient Provision of Forage is to be laid in for the Horses; and what cannot be removed into the City must be burnt. Wine, Vinegar, Grain, and Fruits of all Kinds must be provided in Abundance, and nothing left behind that may be serviceable to the Enemy. As for the Gardens of the City, public and private, Pleasure as well as Profit will induce the Inhabitants to take great Care of them. But it will be of little Service to amass Quantities of Provisions, unless from the very Beginning of the Siege they are distributed by proper Officers with Prudence and Frugality. For never has a Garrison been in Danger from Famine, where Oeconomy has been observed in the Midst of Plenty. The Besieged have sometimes found themselves under the Necessity of turning the old Men, Women, and Children out of the City, lest Want of Provisions might oblige the Garrison to surrender.

Quantities

VIII. Military Stores.

Quantities of Bitumen, Sulphur, liquid Pitch, and incendiary Oil *, must be provided to burn the Machines of the Besiegers. The Magazines must be stored with Iron, Steel, and Coals, to make Arms, together with Wood proper for Spears and Arrows. The round Stones found in Rivers, as of the heaviest Kind, and most proper for the Use of the Slingers, are to be carefully collected, and piled up in Heaps on the Ramparts and Towers. The smallest are thrown by the Sling, by the Fustibalus, or by the Hand; those of the middle Size by the Onagri; and the heaviest and roundest are disposed along the Parapets, to be rolled down upon the Assailants, in Order to crush them in Pieces, and demolish their Machines. Large Wheels are likewise made of green Wood, or smooth Cy-

* Incendiary Oil.] Orig. Oleum quod incendiarium vocant. Ammianus, B. XXIII, thus describes it. "In hac Regione (Media) Oleum conficitur medicum, quo illitum Telum, si emissum lentius laxiore Arcu (nam lectu extinguitur rapido) hæserit unquam, tenaciter cremat; & si Aqua voluerit ablucere quisquam, Æstus excitat acriores Incendiorum, nec Remedio ullo, quam Jactu Pulveris, confopitur. Paratur autem hoc Modo: Oleum Ufus communis Herba quadam insectum condiunt harum Rerum periti, ad Diuturnitatem servantes; & coalescens durant, ex Materia Venæ naturalis, similis Oleo crassiori; quæ Species gignitur apud Persas; quam, ut diximus, Naphtham Vocabulo appellavere gentili."

linders

linders* cut out of great Trees, to be rolled along with greater Facility: when suddenly thrown down steep Places, they destroy Men, Horses, and every Thing in their Way, and spread universal Consternation. Beams, Planks, and Iron Nails of all Sizes, are to be provided for the Construction of Machines to oppose against those of the Enemy: especially as it is often necessary to raise the Height of the Ramparts or Parapets, by expeditiously adding new Works, to prevent their being commanded by the moving Towers of the Besiegers.

A sufficient Quantity of Cords of Sinews: is to be provided, as without them the Onagri, Balistæ, and other Engines are of no Service. The Hairs of the Manes and Tails of Horses are also fit for this Use: and we are taught by Experience of our Ancestors that Womens' Hair will serve equally for this Purpose in Cases of Necessity. At the Siege of the Capitol, the Engines became unserviceable by continual Use, and a Supply of Cords failing, the Roman Women voluntarily cut off their Hair, and gave it their Husbands to repair the Engines, who thereby repulsed the Enemy: thus, by giving up the Ornament of their Hair, these virtuous La-

IX. Cords
of the En-
gines.

* Cylinders cut out of great Trees.] Orig. Cylindri, quos Taleas vocant. Commentators are much divided about the Word Taleæ.

dies preserved their own and their Husband's Liberty. Hair-Cloths and raw Hides* must be provided to cover the Balistæ and other Engines.

X. Precautions against Want of Water.

Perpetual Springs within the Walls are of the utmost Advantage to a City: but where Nature has denied this Convenience, Wells must be sunk, however deep, till you come to Water, which must be drawn up by Ropes. Some Fortresses are built on Mountains or Rocks, the Situation of which is so dry, that they are obliged to fetch Water from Springs that rise below without the Walls, and to secure the Communication by their Weapons from the Ramparts and Towers. If

* Hair Cloths and raw Hides.] Orig. Cornua quoque, vel cruda Coria proficit colligi, ad Cataphractas tegendas, aliaque Machinamenta sive Munimina. This Passage is entirely corrupted, and the Commentators, as usual in Difficulties, take no Notice of it. No Sense can be made of Cornua, and the Cataphractæ are quite foreign to the Subject of the Section, which is appropriated to the Engines. The French Translator, instead of Cornua, reads Cilicia; and instead of Cataphractas, Balistas. We find in Vegetius, and other Authors, that Hair-Cloths and raw Hides were used for Coverings and Defences, and they were equally necessary for the Preservation of these Engines. As this Correction makes a probable Sense of the Passage, I have translated it accordingly. The French Translator, from the Affinity of the Words, also proposes Catapultas instead of Cataphractas: but, as he observes himself, that Word may be objected to, as never used by our Author.

the

the Vein of Water below the Place is out of Reach of their Weapons, a small Fort, called Burgus*, should be erected between the Place and the Spring, with Archers and Engines therein to defend the Men sent for Water. Besides, Cisterns are to be made, to receive the Rain-Water from the Roofs, in all the public and many of the private Buildings. Nor can a Garrison, who use their Water for Drink only, notwithstanding a Scarcity, be easily reduced to Extremity by Thirst.

If besieged in a maritime City, you are in Want of Salt, the Sea-Water must be received into broad Troughs and Reservoirs, and the Heat of the Sun will harden it into Salt. If your Communication with the Water should be cut off by the Enemy, as sometimes happens, you may collect the Sands scattered at a Distance by Winds and Waves, and wash them with fresh Water, which the Sun will also convert into Salt.

In an Attack by Storm, the Danger is reciprocal, and the Dispute generally very bloody: the Besiegers, however, lose the greater Number of Men, but the Besieged are usually most inti-

XI. Methods of making Salt.

XII. The first Assault.

* Burgus.] From the Greek Word Πύργος, Turris; and hence the modern Term Borough.

midated*. For the Assailants, by the formidable Display of their whole Force in Order of Battle, and their Shouts mixed with the Noise of Trumpets, endeavor to terrify the Enemy into a Surrender. If the Besieged are Strangers to Emergencies of this Kind, as Fear makes great Impression on Men unaccustomed to Danger, they are thrown into Confusion by the first Assault, and the Ladders are fixed, and the Place taken. But if the Assault is vigorously sustained by resolute and experienced Troops, the Besieged immediately resume fresh Courage, the Influence of Fear is out of the Question, and each Party exerts all its Force and Skill, depending on them only for Victory.

XIII. Machines for attack.

Machines used in the Attack of a Place are Tortoises, Rams, Scithes, Vines, Mantlets, Musculi, and Towers: I shall describe their Construction separately, and the Manner of employing or opposing them.

XIV. The Ram, Scithe, and Tortoise.

The Tortoise is composed of Beams and Planks, covered with raw Hides, and Cloths of Hair or Wool, to secure them from Fire. Within this Machine is a large Beam headed with a crooked Iron, to pull Stones out of Walls, which from

* But the Besieged are usually most intimidated.] This is an Addition to the Original, which the Sense seemed to require.

its Form is called a Scithe. When one End of the Beam is armed with Iron, it is called a Ram, either from the Hardness of its Head that beats down the Walls, or from its recoiling, like that Creature, to strike with greater Violence. The Tortoise is named from its Similitude to that Animal, that sometimes draws in and sometimes puts out its Head: in the same Manner this Machine drives forward and backward the Beam abovementioned, to give more Force to the Stroke.

The Galleries, called by the Ancients Vines, XV. Vines, Mantlets, and Cavaliers. are now known among the Soldiers by the barbarous Appellation *Causiæ*. This Machine is made of slight Timbers, eight feet high, seven broad, and sixteen long. The Roof is double and composed of Planks and Hurdles: the Sides are likewise so strongly defended by Osier-Work as to be impenetrable by Stones or Darts; and it is entirely covered on the Outside with fresh Hides, or Cloths of Wool, to prevent its being fired. Several of these are joined together, and afford a safe Shelter to the Besiegers who advance under Cover to sap the Foundations of the Walls. Mantlets are composed of Osiers, with an arched Roof, and secured by Hair-Cloths and Hides: they move, like a Carriage, upon three little Wheels, one of which is placed before in the Middle, and the two others at the Corners behind,

The Besiegers advance these Mantlets close to the Walls, and under Cover of them drive the Besieged from the Defences of the Place with Arrows, Slings, and Darts, in order to facilitate the Scalade. The Cavalier is a Mound raised with Earth and Wood, against the Walls of a Place, to enable the Besiegers to annoy the Enemy with their Darts.

XVI. Musculi.

• While the Besiegers are employed in filling up the Ditches with Stones, Fascines, and Earth brought for that Purpose, and in making a firm and solid Passage to advance the moving Towers without Obstruction to the very Walls, they are covered by small Machines called Musculi, which derive their Appellation from a little Sea Animal of the same Name, that notwithstanding its diminutive Size, is of great Assistance to the Whale, by swimming before as a Guide; in the same Manner, these small Machines, destined to attend on the great Towers, move before them to prepare and clear the Way for their Approach.

XVII. Moving Towers.

Towers are large Machines or Buildings composed of Beams and Planks of Timber, and covered carefully with raw Hides and Cloths of Wool to secure so great a Work from Fire.

• The Words, Si Lutum obsuerit, in the Beginning of this Section, are unintelligible.

Their

Their Breadth is in Proportion to their Height, for they are sometimes thirty Feet square, and sometimes forty or fifty; and their Height often exceeds that of the Walls and of the highest Stone Towers. They are artificially mounted on several Wheels, by which these vast Bodies are put in Motion. A Place is in imminent Danger, when the Tower is once advanced to the Walls: for it consists of several Stories, and contains various Machines to be employed in the Attack. In the lower Part is a Ram to batter the Wall: in the Middle, a Bridge made of two parallel Beams of Wood, and covered with a Parapet of Hurdles, to be suddenly pushed forward between the Tower and the Wall: which Bridge serves for a Passage for the Soldiers to attack the Ramparts and enter the City. In the upper Stories of the Tower are Men armed with long Pikes, Arrows, Stones, and Darts, to clear the Ramparts. If they once gain this Point, the City is their own. For what Resource have the Besieged, whose Dependence was on the Height of their Walls, when they see those of the Enemy suddenly raised so much above them?

The Methods of Defence against these formidable Towers are various. In the first Place, the Besieged, if brave and resolute, make vigorous Sallies, beat off the Enemy, tear off the Hides that cover the Machine, and set Fire to it.

XVIII.
How to burn
the moving
Towers.

But

But if they have not Courage to come out, they shoot Weapons called Malleoli and Phalaricæ from large Balistæ, that penetrate the Hides and other Coverings, and fire the Inside of the Tower. The Malleoli are a Kind of burning Arrows, that set Fire wherever they fix. The Phalarica is a Sort of Spear with a strong Iron Point: within a Hollow on the Staff is wrapt a combustible Composition of Tow, Sulphur, Rosin, and Bitumen, soaked in incendiary Oil: this Weapon shot with Force out of the Balista, pierces thro' the Covering of the Tower, and fixes in the Wood; whereby the whole Machine is frequently consumed. Men also with lighted Lanthorns, let down from the Walls by Ropes, take an Opportunity when the Besiegers are off their Guard, to set Fire to the Towers; and then in the same Manner are drawn up again into the City.

XIX. Man-
ner of rais-
ing the
Height of
the Walls.

Another Expedient to defeat the Use of these Machines, is to raise the Part of the Wall threatened by them, with Stones or Mortar, with Bricks or Earth, or with Wood-Work, that the Besieged be not commanded by the superior Height of the Machines*. For it is plain, these
Machines

* Superior Height of the Machines.] Orig. Ne Defensores Mœnium (Machina) desuper Urbi ventura posset opprimere

Machines can be of no Service, if inferior to the Defences of the Place. But the Besiegers generally employ the following Stratagem: they first build a Tower to Appearance lower than the Parapets of the Place; but at the same Time privately construct a small Tower of Wood within it: when the Machine is advanced close to the Walls, they suddenly raise the inner Tower by Ropes and Pullies to a Height which commands the Place, and the Soldiers from within throw themselves into the Works and carry the City.

Long Beams fortified with Iron are sometimes used to prevent the Approach of these Machines near the Walls. At the Siege of Rhodes, the Besiegers having built a moving Tower considerably higher than the Ramparts and all the Towers of the City, an Engineer invented the following Contrivance to render it useless. During the Night he opened a Mine, and carried it on thro' the Foundations of the Wall directly to the Spot whither the Tower was to be removed next Day; the Enemy having no Suspicion of the Design, advanced it to the Place that was undermined; the Ground immediately sunk under the prodigi-

XX. Method of undermining the moving Towers.

primere. Vegetius in this Passage had Virgil in his Eye. *Æn.* II. 46.

*Aut hæc in nostros fabricata est Machina Muros,
Inspectura Domos, venturaque desuper Urbi.*

ous Weight, and they found it impossible either to recover it, or get it nearer the Walls. Thus the Besiegers were obliged to abandon their Tower, and the Place was saved.

XXI. The
scaling Lad-
den, Harp,
Exotra, and
Crane.

When the Towers are advanced up to the Walls, the Slingers with Stones, the Archers with Arrows, the Manubalistarii and Arcubalistarii with Darts, and all the Soldiers that use loaded Javelins or missive Weapons of any Kind, dislodge the Enemy from the Ramparts, and immediately fix their scaling Ladders: but the Assailants, in an Assault of this Nature, are in great Danger; they often meet with the Fate of Capaneus, the reputed Inventor of the Scalade, who was thrown headlong from the Ramparts of Thebes with such Violence, that he was fabled to have been killed by Lightning. The Harp*, Exotra, and Crane† are also employed in an Assault. The Harp is a Kind of Drawbridge, so denominated from its Similitude to that Instrument; for the Ropes which raise it up against the Tower, resemble the Strings of the Harp; and these Ropes, running thro' Pullies, serve to let down the Bridge upon the Wall, which the Soldiers from the Tower immediately pass, and throw themselves into the Place. The Exotra

* Harp.] Orig. Sambuca.

† Crane.] Orig. Tollenon.

is the Bridge, pushed forward from the Tower to the Ramparts, already described*. The Crane is a large Post fixed firmly in the Ground, with a long transverse Beam on the Top so exactly poised, that one End sinking the other rises of Course. To one of these Ends a Machine made of Osier or Wood is suspended, to contain a few Soldiers: the contrary Extremity is drawn to the Ground by the Help of Ropes, and the Men are raised to the Top of the Wall.

Against these Machines of the Besiegers are used the Balistæ, Onagri, Scorpions, Arcubalistæ, Fustibali, Slings, and Arrows. The Balista is bent with Cords of Sinews: the longer its Arms, that is, the larger the Engine itself is, the farther it throws the Darts: if constructed with proper Proportions, and served by skilful Men acquainted with its Powers, it penetrates whatever it strikes. The Onager, according to the Strength and Size of its Cords, throws Stones of different Weights: the largest impel the most ponderous Bodies with a Velocity like that of Lightning. These two Engines are more formidable than all the others. The Manubalistæ, because they kill with small and slender Darts, were formerly called Scorpions. It

XXXII. The
Balistæ,
Onagri,
Scorpions,
Arcubalistæ,
Fustibali,
and Slings,
for Defence.

* Already described.] In Section XVII.

is superfluous to describe* the Fustibali, Arcubalistæ, and Slings, as they are so commonly used and well known at present. I shall observe with Respect to the Onager, that the Stones it throws are of such an enormous Weight, as not only to crush Men and Horses, but also to break in Pieces the Machines of the Enemy.

XXIII.
Mattresses,
Ropes with
running
Knots,
Wolves,
and heavy
Columns,
against the
Ram.

Several Methods are employed against the Rams and Scithes. Sometimes Mattresses and Woolpacks † are suspended from the Walls by Ropes, to deaden the Strokes of the Ram by the Opposition of their soft and yielding Substance, and prevent the Destruction of the Wall. Sometimes the Rams are caught by Ropes with running Knots, drawn obliquely by great Numbers of Men on the Ramparts, and overturned together with their Tortoises. An Iron Instrument with Teeth, like a Pair of Shears, called a Wolf, is often used: when let down with Ropes, it seizes the Ram, and either overturns, or suspends it in such a Manner, as to prevent its battering the Wall. Sometimes Marble Columns or Bases are let down from the Walls, and vibrated with such Force as to break the Rams

* Superfluous to describe.] The Fustibalus and Sling have been already described, Book III, 14.

† Mattresses and Woolpacks.] Orig. Centones & Culcitas.

in Pieces. But when the Violence of the Ram at last makes a Breach in the Wall, and it falls down, as often happens, the only Resource of the Besieged is to demolish the Houses, and run up another Wall within the former, that if the Enemy attempt to storm the Place, they may meet their Destruction on the Ruins of the Breach*.

Another Manner of attacking a Place is by ^{xxiv.} subterranean and secret Works called Mines^{Mines.}†. A Number of Men are employed to work under Ground, in the Manner the Bessi dig in the Mines for Gold and Silver. The Earth is excavated by Dint of Labor, and a subterranean Passage made for the Destruction of the City. There are two Ways of using this Contrivance: the Besiegers either carry on the Gallery till they come under the Body of the Place, which they enter by Night, the Inhabitants not suspecting their Design, open the Gates, introduce their Troops, and kill the Enemy in their Houses; or when the Mines have reached the Foundations of the Wall, they sap great Part, and to prevent

* Ruins of the Breach.] Orig. Inter binos Parietes perimantur.

† Mines.] Orig. Aliud Genus Oppugnationis est subterraneum, atque secretum, quod Cuniculum vocant; a Leporibus, qui Cavernas sub Terris sodiunt, ibique conchantur. This odd Etymology I have left out.

its falling prop it up with Shores of dry Timber, filling the Intervals with Faggots and other Combustibles. When the Troops are ready for the Assault, the Props are set on Fire; when they are consumed, the Wall falls down at once, and a practicable Breach is made for the Storm.

XXV. Resources after a Place is forced.

Innumerable Instances are to be met with where the Enemy were entirely cut in Pieces, even after they had penetrated the Body of the Place: this certainly will happen, if the Besieged continue in Possession of the Ramparts, Towers, and highest Parts of the City. The Inhabitants of every Age and Sex may overwhelm the Enemy with Stones and Weapons of all Kinds from the Windows and Roofs of the Houses; but the Assailants, to avoid this Danger, generally throw open the Gates of the City, that the Besieged, finding they have Opportunity to escape, may not be driven to a desperate Resistance. The sole Resource after a Place is forced, either by Day or Night, is however to secure the Ramparts, Towers, and all the highest Places, and to dispute every Inch of Ground with the Enemy as they advance thro' the Streets.

XXVI. Guard of the Ramparts.

The Besiegers frequently have Recourse to Stratagem, pretend to despair of reducing the Place, and raise the Siege. But as soon as they perceive the Garrison think themselves out of Danger,

Danger, and neglect the Guard of the Ramparts*, they take the Opportunity of the Darkness of Night to return and scale the Walls. For this Reason, the Guard should be kept with greater Strictness on the Retreat of a besieging Army than before; and Sentry-Boxes erected on the Walls and Towers, to shelter the Sentinels from Rain and Cold in Winter, and from the Heat of the Sun in Summer. Fierce Dogs kept in the Towers have proved useful in discovering the Approach of an Enemy by their Scent, and giving Notice thereof by barking. We likewise find Geese no less serviceable in detecting, by their Noise, Surprises by Night. For when the Gauls had got into the Capitol, the very Name of the Romans had been obliterated, if Manlius, alarmed by the Noise of the Geese, had not repulsed the Enemy. Thus by a most wonderful Instance of good Fortune, the People destined to be the Conquerors of the whole World, were saved by the Means of a Bird from utter Destruction.

The most essential Part of the Art of War, not only in Sieges, but in every other Branch,

XXVII.
Stratagems
of the Ro-
mains.

* Guard of the Ramparts.] The Romans were very strict in this, as well as in the other Branches of the Service: and they had, as we find in Quintilian, B. IV, Chap. 5, an express Law, that made it capital for a Stranger to mount the Fortifications,

is to study and endeavor to be thoroughly acquainted with the Customs of the Enemy. It will be impossible to find Opportunities of laying Snares for them, unless you know their Hours of Repose, and the Times when they are least on their Guard: these Opportunities offer sometimes at Noon, sometimes in the Evening, or Night, when the Soldiers of both Sides are at their Meals, or dispersed for the necessary Purposes of Rest or Refreshment. This once ascertained, the Besiegers designedly suspend their Attacks at those Times, in order to increase the Remissness and Negligence of the Enemy: and when they perceive it come to a proper Height by their Artifice in encouraging it by Impunity, they suddenly advance their Machines, or fix their Ladders, and storm the Place. To provide against this Danger, the Besieged plant their Engines, and collect Heaps of Stones, beforehand on the Ramparts, that on repairing to their Posts on the first Alarm, whatever is necessary to repulse and overwhelm the Assailants may be found ready at Hand.

XXVII.

Line of
Counterval-
lation.

Negligence exposes the Besiegers equally to the same Dangers as the Besieged, who in like Manner, watch Opportunities when their Enemies are at their Meals, asleep, or dispersed thro' Idleness, or on other Accounts, make sudden Sallies, kill many of the Besiegers thrown
into

into Consternation by the Surprise, burn their Rams, Machines, and even the very Cavaliers, and level and destroy all their Works. The Besiegers, on the other Hand, carry a Ditch round the Place, out of reach of its Defences, with a Rampart, Palisades, and small Towers, to secure themselves from any Attempt of that Kind: this Work is called the Line of Countervallation*; and we often find it mentioned, in the Description of a Siege, that the Place was surrounded with a Line of Countervallation.

Missive Weapons of every Kind, whether XXIX. Engines for Defence. loaded Javelins, Lances, Spears, or Darts, strike with greater Force when thrown from an Elevation. In the same Manner, Arrows shot from Bows, and Stones thrown either by the Hand, Fustibalus, or common Sling, reach a greater Distance in Proportion to the Height from whence they come. But the Balistæ and Onagri, if well-served, are far superior to all other Sorts of Engines; and neither Bravery nor Arms are any Defence against them, for, like Lightning, they pierce and destroy whatever they strike.

Scaling Ladders and other Machines are of XXX. Method of taking the Height of the Walls. great Use in mounting the Walls, but cannot

* Line of Countervallation.] Orig. Loricula.

answer that Purpose, unless they exceed the Height of the Ramparts of the Place*. There are two Methods of taking the Height†; one, by fixing a small Line to the End of an Arrow, to be shot to the Top of the Rampart; and the known Length of the Line determines the Height of the Wall: the other Method is, when the Sun casts the Shadows of the Towers and Walls obliquely on the Ground, to measure the Length of the Shadows, unknown to the Besieged. A Pole ten Feet high is to be fixed in the Ground at the same Time, and the Shadow it gives must likewise be measured. It will then be easy to find the Height of the Walls, by calculating the Proportion that one Shadow bears to the other, when they know that such a Height gives such a Length of Shade. Thus having digested, for the public Service, whatever is left us by the ancient military Writers, or whatever Experience has taught us since their Times,

* Unless they exceed the Height of the Ramparts of the Place.] Polybius relates the Miscarriage of Philip of Macedon in his Attempt on Melitea by Scalade, where the Ladders were too short; and very properly expatiates on the bad Consequences of Carelessness and Inattention in military Affairs. Book V.

† Methods of taking the Height.] At the Siege of Platææ, the Garrison took the Height of the Enemy's Wall or Countervallation, by counting the Rows of Bricks. Thucydides.

relative

relative to the Attack or Defence of Places, I cannot forbear repeating the absolute Necessity of taking the greatest Precautions to secure the Garrison against Hunger and Thirst, Evils for which there is no Remedy: and the Quantities of Provisions should be the greater, from the Consideration that the Length of the Siege depends wholly on the Option of the Besiegers.

END OF BOOK IV,

C c B O O K

MILITARY INSTITUTIONS
OF
VEGETIUS.

B O O K V.

TO THE
EMPEROR VALENTINIAN.
P R E F A C E.

HAVING in Obedience to Your Majesty's Commands finished my military Treatise as far as relates to the Land-Service, it remains to give some Account of the Marine; and this will be comprised in a small Compass, our Operations against the barbarous Nations having for a long Time past been confined solely to the Land.

B O O K V.

SECTION 1. The Roman Fleet. II. Officers of the Fleet. III. Origin of the Liburnæ. IV. Construction of the Liburnæ. V. Days proper for cutting Timber. VI. Months proper for cutting Timber. VII. Size of the Liburnæ. VIII. Names and Number of the Winds. IX. Safest Months for sailing. X. Astronomical Observations on Storms. XI. Prognostics of Weather. XII. Of the Tides. XIII. Manœuvres of a Fleet. XIV. Naval Arms and Engines. XV. Stratagems employed at Sea. XVI. Instructions for a Sea-Fight.

SECT. I.
The Roman
Fleet.

THE Romans, in the first Ages of the Republic, only fitted out their Fleets in Cases of Necessity, where their Honor or Interest were concerned; but in Process of Time, they found it requisite to keep their Fleets always in Readiness, not to be taken unprepared on sudden Emergencies; for none will attack or insult a Power, known to be always ready, and prepared to revenge any Affront. One Fleet was therefore stationed at Misenum, and another at Ravenna; and each Fleet had a Legion appointed for its Service. These Ports were conveniently situated both for the Protection of the City, and the immediate and direct sailing of the Fleets to any Part of the World where required. The Fleet at Misenum was at Hand
for

for Gaul, Spain, Mauritania, Africa, Egypt, Sardinia, and Sicily; and the Fleet at Ravenna for Epire, Macedonia, Achaia, Propontis, Pontus, the East, Crete, and Cyprus. These Fleets were judiciously stationed; for in War Expedition often proves of more Consequence than Courage.

All the Ships on the Campanian Station were commanded by the Præfect of the Fleet at Misenum: and those in the Ionian Sea by the Præfect at Ravenna. Ten Tribunes, according to the Number of Cohorts in each Legion, were under the Command of each of these Officers. Each Man of War had also a Captain*, whose particular Duty was, besides the other Branches of his Charge, daily to exercise the Pilots, Rowers, and Soldiers.

II. Officers of the Fleet.

Various Nations have at different Times been powerful at Sea; and the Ships that composed their Fleets were likewise of different Kinds. At the Battle of Actium, where Augustus defeated Antony chiefly by Means of the auxiliary Ships of the Liburnians, their superior Excellence appearing conspicuously, they were preferred to every other Sort: from this Period, the Roman Emperors built their Ships after the Model, and

III. Origin of the Liburnians.

* Captain.] Orig. Navarchus, quasi Navicularius.

adopted the Name of Liburnæ. Liburnia is Part of Dalmatia, and its Capital City, Jadera. Our Men of War are at this Day built in the same Manner, and retain the same Appellation.

IV. Construction of the Liburnæ.

Great Care is used in the Choice of Materials to build a House, but surely much greater is required in building a Ship, the Defects of the Ship being of much worse Consequence than those of the House. The Liburnæ are generally built of Cypress, common or wild Pine, Larch, or Fir: and brass Nails are much better for the Joints than Iron ones. For tho' the Expence seems greater at first, the brass Nails prove cheaper in the End, as they last longer; Iron Nails, exposed to Air and Water, are soon destroyed by Rust; while brass suffer no Diminution of Substance, even from Water itself.

V. Days proper for cutting Timber.

It is a Rule, that Timber for the Construction of the Liburnæ should be felled from the fifteenth to the twenty-third Day of the Moon. This is the only Space for cutting Trees to preserve their Soundness: and those cut down at any other Time become worm-eaten and rotten within the Year. Reason and the constant Practice of Architects * has established the Truth of this Observation.

* Reason and the constant Practice of Architects.] To these Reasons Vegetius adds another of an extraordinary Kind.

VI. Months
proper for
cutting
Timber.

The proper Time for felling Wood for Sea-Service is after the Summer Solstice, that is, in the Months of July and August, and from the Autumnal Equinox till the first of January. In these Months the Sap having done rising, the Wood is consequently drier and harder. Timber must never be cut into Planks as soon as felled, nor the Planks used in the Construction of Vessels immediately when cut out. For the Trees when felled should be left entire a certain Time before they are cut into Planks; and after the Planks are sawn out, they require another Interval, before applied to Use, that they may have Time to be thoroughly dried. For Planks used green in Ships, shrink as they dry, and thereby occasion large Leaks of most dangerous Consequence at Sea.

Kind. The whole Passage is as follows: "*Quod Ars ipsa, & omnium Architectorum quotidianus Usus edocuit, & Contemplatione ipsius Religionis agnoscimus, quam pro Aeternitate his tantum Diebus placuit celebrari.*" He has found out that this Interval between the fifteenth and twenty-third of the Moon, in which he says Trees should be felled, coincides with the Time appointed for the Celebration of Easter. What Connexion or Affinity this can have with the Subject in Question, I leave to others to determine. Stewechius observes that one Manuscript has *placuit Pascha celebrari*, and tells us at the same Time that the Word *Pascha* is a Gloss. But I question whether, without the Assistance of that Word, it would have been an easy Matter to unravel our Author's Meaning.

The

VII. *See*
of the *Lib-*
urnæ.

The smallest Liburnæ have a single Rank of Oars, those of a middle Size two, and those of just Dimensions three, four, and sometimes five. Nor will this seem prodigious, when we are told they had much larger Ships at the Battle of Actium, of six Ranks of Oars, and even more. Sloops of about twenty Rowers on each Side are also appointed to attend on the large Liburnæ: for these Vessels the Britons have a peculiar Term*. They are employed in surprising the Enemy's Ships, intercepting their Transports of Provisions, reconnoitring their Motions, and discovering their Designs. But as their Whiteness would show at a Distance, their Sails and Ropes are tinged Sea-Green to resemble the Color of this Water, and even the Composition† the Sides are paid with is colored in the same Manner. The Seamen and Soldiers are also clothed in the same Color to be less liable to be discovered either by Night or Day on the reconnoitring Service.

* A peculiar Term.] Orig. Quas Britanni Pictas vocant; or Picatas: Stewechius conjectures this should be Pincas, and thence derives the Word Pink.

† Composition.] Orig. Cera, qua ungere solent Navis. Pliny, Hist. Nat. B. XXXV, Ch. XI. has the following Passage: "In Encaustice pingendi duo fuisse antiquitus Genera constat, Cera, & in Ebore, Cestro, id est, Virgulo, donec Classēs pingi cæpere. Hoc tertium accessit, resolutis Igni Ceris Penicillo utendis, quæ Pictura in Navibus nec Sale, Ventisque corrumpitur."

Whoever

Whoever commands an Army at Sea, should be thorough acquainted with the Prognostics of bad Weather: for more Ships are lost by Storms, than by Engagements with an Enemy. This requires great Skill in natural Philosophy, which teaches the Nature of Winds and Tempests by the Knowledge of the Heavens. On this dangerous Element, cautious Men are secure from Perils that the careless are exposed to. The first Point therefore in the Art of Navigation is to know the Number and Names of the Winds. The Ancients, according to the Position of the Cardinal Points, believed there were only four principal Winds which blew from the four Quarters of the Heavens, but Experience has since convinced us there are twelve. To explain this, we shall give the Names of the principal Winds*,

VIII.
Names and
Number of
the Winds.

* Names of the principal Winds.] Vegetius gives us both the Greek and Latin Names of all these Winds. I have made some Alteration in the Translation, and shall here insert the Original. A Verno itaque Solstitio, id est, ab Orientali Cardine, sumimus Exordium, ex quo Ventus oritur *Ἀνέμους*, id est, Subsolanus: huic a Dextre jungitur *Καυκίας*, seu Erobinus: a sinistra *Εὐρύς*, sive Vulturius. Meridianum autem Cardinem possidet *Νέρος*, id est, Auster: huic a Dextra jungitur *Αλευκός*, id est, Albus Notus: a sinistra *Αἰθέρης*, id est, Corus. Occidentalem vero Cardinem tenet *Ζέφυρος*, id est, Subvespertinus: huic a Dextra jungitur *Αἰψός*, sive Africus: a sinistra *Ἰάνους*, sive Favonius. Septentrionalem vero Cardinem sortitus est *Ἀναγέτις*, sive Septentrio, cui adheret a Dextra *Τρανίας*, sive Circius: a sinistra *Βορέας*, id est, Aquilo.

D d

and

and of the others according to their Order on the right and left. To begin with the Eastern Point, from whence the East Wind blows, with the East-South-East on its right, and the East-North-East on its left. The Southern Quarter is the Seat of the South Wind, on the right of which is the South-South-West, and on the left the South-South-East. The West Wind blows from the Western Point, and has the West-North-West on its right, and the West-South-West on its left. The North Wind possesses the Northern Quarter, with the East-North-East on the right, and the North-North-West on the left. These Winds sometimes blow singly, sometimes two, and in great Storms sometimes three together: by their Fury the Sea, naturally quiet and tranquil, is agitated in a violent Manner; and their Blasts, according to the Seasons of the Year, and the different Parts of the World, change Storms into Calms, and Calms into Storms. A favorable Wind soon wafts a Fleet to the desired Port; but a contrary Wind either stops its Course, forces it back, or exposes it to Danger: yet we seldom find Seamen suffer Shipwreck who are perfectly acquainted with the Nature of the Winds.

*IX. Safest
Months for
sailing.*

In some Seasons of the Year the stormy Weather making it impossible to keep the Sea, it will be necessary to mention the proper Months
for

for Navigation. Some Months are very safe, some are precarious, and in some the Sea is absolutely impracticable. During the Reign of the Phænita, that is, after the Rising of the Pleiades, from the twenty seventh of May till the Rising of Arcturus on the fourteenth of September, Navigation is thought safe, the Summer mitigating the Fury of the Winds. From that Time to the eleventh of November, Navigation is uncertain and rather dangerous, owing to the Rising of the tempestuous Constellation of Arcturus after the thirteenth of September; and the stormy Season of the Equinox happens on the twenty-fourth of the same Month. The Kids always attended with Rain rise about the seventh of October, and the Bull on the eleventh: and in the Month of November the wintry Setting of the Vergiliæ occasions frequent Gales of Wind and Tempests. Thus, from the eleventh of November till the tenth of March the Seas are entirely shut up. During this Interval, the Days are short, the Nights long; and the Darkness of the Air, and the Density of the Clouds, together with the redoubled Rigor of the Winds, Rain, and Snow, prevent not only Ships from putting to Sea, but also Travellers from journeying by Land. But after the Opening of the Navigation, celebrated at Rome with great Solemnities and public Spectacles, that attract a great Concourse of Foreign-

ers, the Influence of several rough Constellations and the Season itself render it dangerous to attempt the Sea till the fifteenth of May: not that the mercantile Part of the World should continue unemployed during this Time, but because much greater Caution is required in the Conduct of a Fleet of Ships of War with an Army on board, which must not run the same Hazards as Vessels of private Traders who risque every Thing for Gain.

X. Astronomical Observations on Storms.

The Rising and Setting of certain Constellations occasion most violent Tempests: some Authors have endeavored to ascertain the particular Days; but they are continually varying from different Causes, and we must confess that Men cannot attain a perfect Knowledge of the Heavens. The Observations necessary to be known at Sea must therefore be divided into three Parts; Experience convincing us that Tempests happen either on a fixed Day, the Day before, or the Day after; for which Reason they are distinguished by three different Greek Appellations*. But it would be tedious as well as useless to enter into a Detail of this Sort, several Authors having carefully particularised not only the Months, but even the Days, to be

* Greek Appellations.] Orig. Unde præcedentes Πραχίμασι, nascentes Die solenni Ἐπιχίμασι, subsequentes Μεταχίμασι, Græco Vocabulo nuncupaverunt.

observed.

observed. The Transits of the Planets*, entering into or leaving certain Signs, frequently bring bad Weather: and we know, by the Observations of Astronomers and common Experience, that the Change of the Moon is attended with Storms that often do great Mischief at Sea.

Changes of Weather are foretold by many Signs that appear in the Orb of the Moon as in a Mirror. When the Moon is red, it denotes Wind; when of a bluish Color, Rain; and when it has a Mixture of both, it prognosticates heavy Rains and violent Tempests: when chearful and bright, it promises Seamen the same Serenity it wears itself, especially if on the fourth Day of its Age, its Horns are not blunt, nor its Disk ruddy, or clouded by Vapors. Many Observations may be made on the rising and setting Sun; whether it shoots its Rays with equal and uninterrupted Lustre, appears of different Colors by the Interposition of Clouds, or looks uniformly bright: when it appears fiery, it is a Sign of Wind; and when pale or spotted, of approaching Rain. The Air, the Sea itself, and the Size, Form, or Color of the Clouds, are so many Guides to attentive Seamen: and

XI. Prognostics of Weather.

* Transits of the Planets.] The Original adds, *Præscripto Curfu Dierum Arbitrio Creatoris.*

even Birds and Fishes are useful in this Respect. Virgil has elegantly described these different Prognostics in his Georgics*, and Varro accurately discussed them in his Treatise on Navigation. Pilots pretend to be thoroughly acquainted with all these Presages, but their Knowledge is more owing to Use and Habit, than founded on Depth of Reason or Reflection.

XII. Of the
Tides.

The Sea is the third Element, and besides what the Winds occasion, has a peculiar Movement and Agitation of its own: at certain Hours both of Day and Night it advances and retires by a Motion called the Flux and Reflux; at one Time, like a Torrent, it overflows the Land, and at another, draws the Water off again into its proper Bed. This reciprocal and changeable Motion assists or retards Vessels according as it is favorable or contrary: Considerations to be maturely weighed before an Engagement at Sea. The Strength of the Tide cannot be overcome by Force of Oars, and is sometimes superior to the Wind itself. As the Times of the Tide vary in different Parts of the World, and according to the Age of the Moon, a Commander of a Fleet should be well acquainted with the Hours of its ebbing and flowing on the Coast

* Virgil in his Georgics.] Orig. Quæ Virgilius in Georgicis divino pene comprehendit Ingenio. See Book I, 424, & seq.

where

where he happens to be, before he pretends to hazard an Action.

The Skill of Pilots consists in their perfect Knowledge of Seas and Harbors, which enables them to avoid the Rocks covered and uncovered, Shelves, and Sands. The deeper the Sea, the greater the Safety. The principal Qualification in the Captain is Vigilance, in the Pilot Skill, and in the Rowers Strength; because naval Engagements are fought when the Sea is calm, and the Ships not moved by the Wind, depend entirely on the Force of Oars, either to attack the Enemy's Ships with their Beaks, or in their Turn to avoid the Shock: and in these Manœuvres, it is the Strength of the Rowers, and the Dexterity of the Pilot, that generally decides the Victory.

Different Kinds of Arms are required in a Battle by Land, but many more in an Action by Sea, and also Machines and Engines like those used in the Attack or Defence of Places. What can be more terrible than a Sea Fight, in which Fire and Water both unite for the Destruction of the Combatants? They should therefore be completely armed with Cuirasses, Coats of Mail, Helmets, and Greaves: for Soldiers who fight in Ships without stirring from their Posts cannot complain of the Weight of their Arms. Their Shields

XIII. Manœuvres of a Fleet.

XIV. Naval Arms and Engines.

Shields should be of a stronger and larger Make, to resist the Blows of Stones, and to protect them from Scithes, Hooks, and other naval Arms. They engage with all Kinds of missive Weapons, with Stones, Arrows, Darts, and loaded Javelins, thrown by Slings and Fustibali, or shot from the Onagri, Balistæ, or Scorpions. But the bloodiest Part of an Action is, when the most intrepid, after the Ships are laid alongside and Bridges thrown between, board the Enemy, and engage Sword in Hand. Turrets are also erected in the largest Ships, to enable them to annoy the Enemy, and destroy them more easily, as from the Top of a Rampart. Arrows covered with Tow and a Composition of incendiary Oil, Sulphur, and Bitumen, are also shot from the Balistæ into the Enemy's Ships, and fixing in their Sides paid with Wax, Pitch, and Rosin, instantly set them in a Flame. Thus, in Engagements at Sea, some fall by the Sword, some are destroyed by Stones, and some perish by Fire in the very Midst of the Waves, and all are deprived of the Rites of Sepulture.*

* Rites of Sepulture.] Orig. Inter tanta tamen Mortuum Genera (qui acerbissimus Casus est) absumenda Piscibus insepulta sunt Corpora. This, though certainly intended as a very serious Reflection by Vegetius, would have seemed rather ludicrous in a modern Translation. However, it may in some Measure be excused by the known Superstition of the Ancients on this Head. See Note, B.

Endeavors are used to surprize an Enemy off ^{XV, Stratagem employed at Sea.} his guard at Sea as well as Land, and Ambuscades formed for that Purpose in the most convenient Straits and Passages of Islands. If their Seamen are fatigued with rowing; if the Wind or Tide is against them; if they suspect no Danger; if the Road where they lie has no Outlet; or if a fair Opportunity of fighting offers, we must by no Means neglect the Favors of Fortune, but engage them on such advantageous Terms. But if they avoid your Snares, and force you to a general Action, then the Ships must form the Line of Battle, not in a direct Line, as an Army is drawn up at Land, but in the Form of a Half-Moon: thus the Wings will be advanced, and the Center hollow; and if the Enemy attempt to force the Center, they will by this Disposition find themselves entirely surrounded. The Ships of the greatest Force and best Troops are for this Reason to be posted in the Wings.

II, Sect. 20. And Ovid, after escaping Shipwreck in a Storm expresses himself in the same Manner:

Non Letum timeo : Genus est miserabile Leti :

Demite Naufragium : Mors mihi Munus erit.

Est aliquid, Fatoque suo, Ferroque cadentem

In solida moriens ponere Corpus Humo ;

Et mandare suis aliqua, et sperare Sepulcrum,

Et non æquoreis Piscibus esse Cibum.

Trist. II. Eleg. 2.

XVI. In-
structions
for a Sea-
Fight.

It is very essential to secure sufficient Sea-Room for your own Fleet, and straiten the Enemy by driving them to the Shore; in which confined Situation they cannot work their Ships so as to engage with the proper Impetuosity. In Sea-Engagements three Sorts of Weapons are very serviceable: Iron-headed Beams, Scithes, and double Pole-Axes: These Beams are long and slender, armed with Iron at both Ends, and suspended on the Mast like a Yard. On which Side soever the Enemy attempt to board, this Machine worked in the same Manner as the Ram, destroys their Soldiers and Seamen, and frequently perforates the Ship itself. The Scithe, a sharp and crooked Iron, so called from its Resemblance to that Instrument, is fixed to a long Pole; with this they suddenly cut the Ropes that suspend the Yards and Sails, and thereby render the Ship motionless and unserviceable. The double Pole Ax is an Ax with two very broad and sharp Edges; with this Weapon, the most dextrous and resolute Sailors or Soldiers, in the very Heat of Action, privately cut the Tackles that fasten the Rudders of the Enemy's Ships, whereby they are instantly disabled and taken. For what can a Vessel do that has lost its Rudder? I shall say nothing of the armed Vessels kept Night and Day as Guard-Ships on the Danube: the great Perfection to which they are

are brought is owing to the frequent Use now made of them, and not to any Instructions left us by the Ancients.

F I N I S.



E R R A T A.

Preface, Page 3, Line 18, read Etymologies.
————— 9, ——— 13, ——— Extremities.

Page 41, Margin, read Evolutions.
—— 62, Note. Line 26, — the Park.
—— 76, Note. ——— 8, — fatal Defeat.
—— 139, ——— 18, — increase.
—— 159, ——— 10, — is to be too much elated.